

# THE VALLEY FARMER



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### THE ADVANTAGES OF FARMING.

There are some men who enjoy farming—not for the money they make—but for the pleasure it affords them. Here are green fields, heavy with grass—the nice Timothy; and the fine, dense clover; and grain, thick and dark with richness. These things are gratifying to behold. Then, when the grain is tall, and waves in the breeze; when the clover is a cloud, tinged with red, and such a fragrance; Timothy that makes the eye sparkle to see the thick, heavy heads, and all as even as a floor; and then the corn, black with fatness (there are few sights finer than a full tasseled corn field)—they are all nice, it is true; but the wealth, the magnificence of this, in all its varied splendor—nothing exceeds it.

All this is not only fine to the poet's eye—the farmer enjoys it with the additional sense of profit, which, as Thackeray said, is one of the most lasting pleasures.

But the ground itself. To see a man work in his garden in June, when the soil is moist, just between the wet and the dry, clearing the hoe; as soon after a shower as possible, when all the vegetation is in its freshest—such a scene is enjoyable. There is the strong, stimulating smell of the mould; the fine, dark color of the soil, all free from weeds. This is a positive pleasure. So it is to harrow, to cultivate your soil, when in a perfectly mellow condition. And even to plow, is one of the chief pleasures of the farmer. Turn up your fallow, after the heats of June have mellowed the rich sward-ground. We sometimes think this is the best of all—to note the rich, crumbling mould, strong with smells. What promise there is here! what health in this stimulating exercise! what honor! Such a man is not only happy—he can look the whole world in the face; besides, he is supporting the world, the lazy as well as the thrifty.

Now, when a man's labor becomes a pleasure, why, there can be nothing more fortunate. Get paid for pleasure! Think of that—and hold up his head honestly among honest men—and be even praised for doing it. This is what life should be.

But we have not yet touched upon the harvest, white with grain, fresh with hay-odors the sweetest in the world—the “smooth, shaven green,” the “tanned hay-cock,” as Milton has it. He appreciated this—and so many, many, years ago, like our own years, that seem to go back, back, almost coeval with the ancients.—And a hay-field, when freshly shorn, is never so pleasant as at evening. Then the odors are out thick and strong. The eye, the ear, have nothing equal to it. This part of farming—this

view rather, or sense, is a part not generally entertained. Yet some men will enjoy it—and they are not the least intelligent.

We have said nothing of the grain on the threshing floor—the corn (such ears!) in the crib; and to feed your hay to your stock in winter, when its odor brings the very life of summer to your mind.

There are also trees that charm your eye upon the farm. These you have long made a pet of, and they show it, as they always will when you attend to them; they like nothing better. Then to note these very trees that you have been tending—that you made grow—it is your work, aided by the ground, and the sun, and such falling showers, as though they were intended especially for you—and are they not? But another great phase of the tree is, to note the advance of its fruit, beginning with the blossoms, and so along down the bending year to autumn. Then you have the smells and the ripe fruit—and what color! what size! yellow and blood-red and striped, and all forms. And is this no pleasure? Ask your children; ask yourself, when the early fruit presents itself, so early!—apples in summer—and what fall luxuriance of relish and growth, to say nothing of winter—the long, pleasant winter evenings, when fruit has so large a share of our attention.

"How about the manure?" Asks the true farmer. He will call it gold. Its ammonia is pungent, not fetid. Not the grain itself will make his eye sparkle more than a fine heap of compost. And he is not loth to work at it.

"Draining—that, however, is an exception."

It is? Well; you have never ditched, or at least not as you should have ditched. We remember our first ditching. We found the soil heavy. We found also how mellow the muck and clay, that were thrown up, became during the summer and winter; how the grass grew a dark ridge along; and how we used it for manure afterward; and what crops we have since raised, and are yet raising—though nearly a score of years have passed—from this same soil, once so wet. Draining has been our delight since—and does the reader fail to see why?

"You have given us the sunny side of farming; now give us the shade."

That is not in the picture of a good farmer, or but slightly—no more than human nature requires and makes necessary. The shade is found in poor farming. If there is a worse sight in the world than a negligent farmer, it is found in the hovels of the city. A wretched

farmer is, of all men, we were going to say, the most wretched. He murders the earth—does all he can to spoil it—and he succeeds in a measure. Thistles and weeds follow in his footsteps: he does all he can to make the earth as near like himself as possible. No fences, no grain, no grass—starving cattle, ragged children, wretched apartments—and orchards, the very personification of wretchedness and ruin. Here is shade enough—the half not yet told: it is night-shade, in truth. But this is not a farmer, no more than a cobbler is a bootman. Here *all* is shade. When a man attempts to be a farmer, he must not become such a one. The true tiller of the soil is lord of the soil. He is the prince that ornaments, that develops, and makes even the desert blossom like the rose. Such a man is an ornament to his kind. Who will assume the position? who can? for it requires much to be a farmer: not a mere plowman and reaper, a hard worker. Then a man becomes a drudge—his own slave. What dignity there is in the guild! what shining lights! men of the first stamp, the purest mint! They shine in our legislative halls; in our varied institutions. They are the bone and sinew of the land—the foundation of our country. They have the fairest, the healthiest and the most intelligent daughters; the finest sons, worthy of any soil: most of all, they have health and contentment.

#### A Few Hints on Wheat Culture.

Farmers are beginning to think about preparing their ground for wheat. A few words on the subject may not be inappropriate. When the ground is properly prepared, and the seed properly sown—the wheat crop, on farms distant from market, is one of the most profitable. There is but little wheat put in as it ought to be. In too many cases, the ground is plowed but once, and then but three or four inches in depth. Can a heavy crop be expected from such a preparation? The soil should be plowed to the depth of, at least, 12 inches, and it should be plowed two or three times before the seed is sown. Some practice sub-soiling, and say that it pays them abundantly. By this depth of plowing, not only is there more plant food furnished—not only can the roots run down deeper into the soil, and thus be able to better withstand the upheaving of the earth by the winter frosts—not only can they better endure the severe drouths of the succeeding spring (such as we have just passed through): but, what is more important than all, the great

depth of soil furnishes an excellent drainage for the winter rains, allowing the water to work down into the soil, and to gradually work off, thus preventing winter-killing by the plants being heaved out by the constant thawing and freezing, and the upheaval of the soil, where it is moist, exposing the roots of the plants to the drying winds and cutting frosts. Not a winter passes but in some section or other, or in all sections, we hear that the wheat is "winter-killed." And so it is, when put in so shallow; but, when put in properly, no such complaint will be heard.

In selecting ground for wheat, choose that which is rolling and naturally well drained. In the Northern climate, where snow falls and lays upon the ground all winter, this is not so important. But here, where we have rain instead of snow, where it thaws one day and freezes the next, or does both on the same day—it is a matter of the first importance. It is also well to plow the ground in what are termed back furrows, leaving open or water furrows to carry off the surplus water.

We urge the value of the drill in putting in the seed. It can certainly be done more evenly, and the plants will be less liable to be heaved out. The yield will also prove greater.

Seed is a matter of the first importance.—None but the plumpest and best should ever be used. It should be fanned and re-fanned, and all the foul seed and light kernels blown from it. Then it should be washed in lime water, or other pickle, removing everything from the kernel that may affect the health of the plant.

The little extra labor used in cleansing and purifying the seed, will reward one a hundred-fold. Then cheat or chess, oats, smut, &c., will be strangers to the coming crop, the succeeding spring, and the field will be a pleasant sight to behold.

Bees.—It is the opinion of Quinby (in the *N. Y. Agriculturist*) that the blossoms of fruit trees secrete more honey at one season than at another; and he thinks it is a peculiar state of the atmosphere that effects this. If honey is plenty, bees will immediately swarm; otherwise not till clover comes in. This may account for the variable condition of swarming. Mr. Quinby also states that a young queen will sometimes meet a drone that belongs to a hive three miles away—thus accounting for the difficulty of getting pure Italian stock. But, he says, "the peculiar structure of the queen bee makes

the drone of an Italian queen pure, while her workers may be hybrid.

### COMSTOCK'S ROTARY SPADER.

ED. VALLEY FARMER: I notice a communication in the *Country Gentleman* of June 9th, 1864, from M. L. Sullivan, Esq., the great Illinois farmer, in regard to Comstock's Rotary Spader. He recommends it very highly; and in these war times, when labor is so scarce, it becomes the farmer to make use of all the new machines that will save him in hire.

Please let me know where these machines can be purchased, and something about them, if you know anything of them. The following is from Mr. Sullivan's letter:

"I commenced working one of them on the 19th of April, preparing ground for corn, and have worked it constantly since when the ground was in condition for working. It has spaded up to this time about 75 acres. A few days later, I started two more, and a fourth some ten days since. They have all been running constantly when it was not too wet. I am working two of them with four horses, and one man each; the other two we work in a gang, with a team of six pairs of oxen driven and managed by one man.

"These machines work three feet in width and eight inches deep, pulverizing the soil more thoroughly and preparing a better seed bed than I have been enabled to do with the plow and harrow.

"The horse machines do one acre each per hour, with a speed of 2½ miles; the gang will do one acre per hour, with a speed of 1½ miles.

"I expect, in a day or two, to have a machine the full width of a corn row (3 feet 8 inches), at work, with a self-acting corn planter attached. This machine will be capable of preparing and planting the ground at the rate of one acre per hour, with a speed of 2½ miles. We think four horses or six oxen and one man will work and manage it readily.

"As to my opinion of it, I have no hesitation in saying that I think it is the greatest step forward that has been made in agricultural machinery. I believe they will supersede the plow on our prairies and similar soils, and cause a great revolution in agriculture. So far, the wear seems slight; and I do not believe that the cost of keeping them in repair will be greater relatively than plows. I can, by the use of these spaders, prepare the soil and plant it to corn for 50 cents per acre, estimating the wages of men at \$1.50 per day, and horses 50 cents

each. Aside from the reduced cost of doing the work as compared with the plow, I shall expect from its deeper and more thorough comminution of the soil, to get a yield of from 25 to 50 per cent. more, with the same cultivation, than with ordinary plowing which does not average more than 4 inches in depth in this State. Our season has been backward and wet, the weather is now fine, and plowing and planting are going on as rapidly as is consistent with the scarcity of labor throughout the State. By the aid of the spader I am getting well forward with my corn planting, and hope to finish in good season—much earlier than usual."

I have given you Mr. Sullivan's letter in full, so that you can see what he thinks of it.

Monroe City, Mo.

CHAS. SWIFT.

[REPLY—C. Comstock, Milwaukee, Wis., is the patentee and manufacturer of the Rotary Spader.—Ed.]

### WEEDS.

One of the most common sights, is the weeds in our fields. How many fields do we meet with that are clean? Weeds are the rule, almost everywhere. This is dirt—what the housewife's dirty kitchen is to the house. There is no particle of an excuse for weeds. We know slovenly farmers by them—weeds choking the grain, and driving the grass out of the field. People sow dirt; and they are pretty sure to get it, as weeds have a knack at growing.

It is remarkable, incredible, that our rich soils should have such foul stuff sown upon them—a man coolly throwing the dangerous thing upon his ground, worth, each acre, almost a little farm. And there the weed grows; the poor grain is put down—and, then, get it out if you can. These corrupt things will not readily yield their hold upon such valuable soil.—They luxuriate and penetrate, and there they are—how beautiful! How beautifully thistles (Canada) will occupy your soil! soil worth a hundred dollars an acre. How dense they will grow! so that not a spire of grass will be seen. This thing is permitted throughout the country, and people will say they have no time to eradicate weeds—can't do it—or—and then hint of the moon, &c. The very same day you will find them sowing thistles.

Then, there are the beautiful white daisies, how poetical they are! What a spell Chaucer throws round them! And the buttercup (yellow daisy) scattered all over the fields like so much gold, companions of the dandelion—another gold flower. Thus our farmers have

turned poets—not only admirers, but producers. How the poets are indebted to them—raising crops of poetry as well as—grain, we meant to say. All that is needed with these farmers, is to put these posies into rhyme; then they are poets as well as farmers. F.G.

### STRAW IN MANURE.

Some farmers object to straw in their manure, and, in its stead, recommend muck, ground, &c. Others say that straw benefits soil mechanically—this is on good authority. We know there is but little fertility in straw; so there must be another quality, for we know that straw benefits land—of course, not equal to short, rich manure. Straw, but more particularly the green stalk, is a necessity to the soil. If not returned to it in a greater or less degree, the best soil will become impoverished. This is the experience of old, careful farmers, and of the world. The old worn-out countries show this. Any green crop will benefit the soil—add to its original properties. Hence, artificial fertilizers are not so good as the manurial product of the farm. That contains the natural as well as artificial properties of the soil; also, what it gets from the atmosphere. It is therefore so urgently advised to feed the products of the farm on the farm as much as may be, so as to return the manure to the soil—the fibrous part, the straw, which acts mechanically on the soil. But this (the fibrous part) is but a small part of manure. The economy of saving all the manure that can be made on the farm, is the very best the farmer can have: there is nothing like it. Save the straw then, if it is light and apparently worthless. By and by the farm will need it—when it is gone. But in the West (our best hold) we are so apt to do differently.

OIL SPRINGS IN MISSOURI.—The Carrollton (Mo.) Democrat mentions the existence of indications of oil springs in Carroll county, which may ultimately become valuable. For many years past, petroleum has been observed on the water of the springs in the county, and it was sometimes used with good effect in certain diseases. In some of these springs, the petroleum was so plentiful that they were called Tar springs; but the existence of oil reservoirs in the earth was never suspected until a short time ago, when some Pennsylvanians visiting the county, having been attracted by the signs, examined them, and came to the conclusion that the petroleum existed in sufficient abundance to justify boring for it. They therefore leased a tract of land eight or ten miles square, and are preparing to bring forward machinery for vigorous operations. Should they be successful in opening oil reservoirs, Carroll county will become the seat of a trade of no little value.

### CULTURE OF CABBAGE.

Eleven thousand heads of cabbage may be raised from an acre. This, sold at five cents, will bring five hundred dollars. It is said by those who have raised cabbage extensively, that it is one of the best crops to feed to stock—young stock and cows in particular. There is no doubt of it. Cows are fond of it, and give largely of milk. Some object to its acrid taste and pungent flavor, as this is perceptible in the milk. But the objection is obviated in the case of young stock, and cows out of milk.

To raise cabbage, the richest of ground is necessary. We have known cabbage raised for a dozen years in succession on the same spot, and each crop a good one, varying, of course, with the season. But the soil was of the best kind, so that but little manure was needed.—But the soil if still better, would have raised better cabbage. Planted in a hog-yard, or where manure has long lain, gives the best of crops—better than any we have ever seen. It is almost impossible to get your ground too rich for cabbage; and it wants depth, as its long roots penetrate.

Cabbage, like berries, and all water-loving plants, dries the soil rapidly, and hence gives it a harsh, sterile appearance, unless very rich and mellow. Irrigation cannot be too largely indulged in with cabbage. A thorough cultivation of the soil, deep tillage, will aid in this respect.

### THE VARNISH TREE.

As Americans, we must be as independent as possible of other nations. Everything that our nation can produce, should be grown here. It is bad policy to be sending our coin off to other nations, to pay their laborers and to build up their country at the expense of our own.

We all know the Japan Varnish. It is obtained from a tree—a species of the *Ailanthus*—not the silkworm *Ailanthus*, but the *Rhus Vernix*. It would, undoubtedly, succeed well here. The *Ailanthus* that is so common here, was imported into this country by the Elder Prince, if we recollect right, and thrives amazingly. The *Rhus Vernix* is grown to a great extent in Japan and China, and the varnish obtained from it is a source of much profit to those nations. It is obtained by making an incision in the trunk of the tree—in pretty much the same manner as is practiced in gathering pitch from the pine. The yield is said to be very large, and the production of the article profitable. Who knows but that in a few years we shall see large plantations of the *Ailanthus* for varnish?

### SOW RYE.

Farmers would find it greatly to their interest to sow more rye. For winter and early spring pasturage, it is very valuable. All kinds of stock like to get a green nibble whenever it can be obtained in winter—and in spring it will furnish good pasturage before it can be obtained elsewhere.

It is not only as food for stock that we urge its cultivation, but it is of great value to the soil as a preparation for some other crop. It is almost equal to a coat of manure if the green crop is plowed in, in the spring. The soil is full of the roots of the plant, and there is also the coat which covers the surface—and if these are turned in, they ferment and decay, and consequently enrich the land. The coating will also prevent, to a considerable extent, the washing of the land by the severe rains of winter. The crop, if not plowed in, is a paying one. If our readers will put in a few acres of rye, they will not fail to sow it every fall hereafter. It should be sown at the same time and in like manner as fall sown wheat. It is not necessary to bestow the same preparation of the soil as for wheat, unless one feels disposed to do so.

**TOBACCO FOR CUT WORMS.**—Some years since I concluded on raising some cabbages for winter feed for my cows. With the assistance of my boys I planted several acres, and the next morning on looking at them I found a great many of them destroyed by cut worms; we planted more, and killed what worms we could find, but the next morning found hundreds of the plants killed. We planted more, and strewn ashes, lime, salt, cow manure and chicken manure—and in fact everything I could then think of, but did not succeed in stopping their depredations; at last I came to the conclusion that the 'critters' had learned to chew, and that my best way would be to supply them with tobacco at once; I therefore put about half a pound of tobacco into a bucket of boiling water, and when it was cool, I took a pint cup and put a little on each plant as I pricked it out. I looked next morning, and found one plant destroyed and the worm beside it dead. I always practice the same plan, and do not think I have lost a plant since; that year I saved 1500 out of 6000. I have tried tobacco for the bugs that infest cucumbers and melons, but it does not affect them as it does cut worms.—[*Cor. Prairie Farmer.*]

**A PLEASANT THING.**—To pay your last debt.

### A Refreshing Sight in a Drouth.

In the drouth that has been raging, we noted the marked effect of the green fields of sowed corn and sorgho. The corn so shaded the ground—ground so mellow that it withstood in itself the drouth—that there was no perceptible check to the growth. Here was a most refreshing sight to all the weary, longing eyes, that looked from the scorched pastures. And when it was brought to them, what a sight to see the poor cattle feast upon the juicy stalks. This was a pleasure in itself—to the cattle and the beholder—and there were many looking on.

The corn stalks are not lost if there should be no drouth. They can be harvested, and are more profitable than a crop of hay. In winter they are reliable to stock, and afford milk. The rule is, drouth to a greater or less extent; so we should always provide against such a time. Those who have thoroughly tested the matter, need no urging.

In a season more or less moist, there is a superabundance of pasture; the grass shoots up and becomes useless. Less pasture should, therefore, be set apart, and dependence made upon corn. Here is safety. It is, in itself, like a refreshing shower. A small spot will afford considerable fodder; and if your herd is not too large, will lift it over into the fall feed. Thus farming has many guards against mishaps—one of the chiefest of which is a drouth.—Fodder corn is the safeguard, especially for milch cows. It is indispensable to them. Many farmers have learned a lesson this severe season, and will profit by it next year.

[Written for the Valley Farmer.]

**LEAD ROOFING.**—In the *Valley Farmer* for July, "G.W.D." recommends lead for roofing, "rolled as thin as you wish, and as broad and long as may be desired," and proposes that it be tacked down with saddlers' tacks.

Sheet lead in any ordinary thickness, in certain seasons of the year, put on with tacks, or indeed in any way, to confine it, would be torn to ribbons in less than a month. Lead cannot be confined to a roof, subject to the variations of temperature without being rent by the expansion and contraction of heat and cold.

Even in leading a narrow valley between two roofs uniting at right angles, there is hardly one carpenter in ten who will secure the lead so that it is not split in a few weeks after it is put on. This I know from long practical observation and experience.

Paper, though a poor material, when well

put on, makes a much better roof; and cloth, properly treated, is far superior, and in many localities, in ordinary times, is even the cheapest roof that can be had. I have a roof, covered with cloth that has now been exposed to the weather for seven years, and is apparently as good as when first put on. H. P. B.

### A SPRING FOR STOCK.

**ED. VALLEY FARMER:** I have a plan for a fountain or spring for stock and other water, that I wish to submit to your readers for criticism, before commencing to build it, as it will cost some money, and I do not propose to take out Letters Patent, and would not object to assistance in perfecting the invention.

My grounds are on an elevated table land or ridge, with abrupt hills on three sides, not very distant from the house. I propose to under-drain about five acres, with good stone or tile drain (probably the latter), leading the whole by a main pipe of large size, down a gradual slope, to a suitable place on an abrupt hill-side in my pasture lot, where I intend digging a cistern, which I shall wall with stone (say two feet thick or more), laid in good clay mortar (except about six inches of the inside of said wall, which will be laid in cement made of new water lime one part and clean sand three parts), with two good coats of plaster of said cement on the inside of the cistern.

Said cistern to be thirty feet long by ten feet wide and ten feet deep, which will hold 700 barrels of water; conduct the main drain into the top of the cistern, with an outlet on the opposite side also at the top to draw off surplus water; insert a small pipe through the wall on the front or lower hill side at the bottom of the cistern, with a faucet or stop-cock that can be regulated to a stream of very small dimensions, leading into a large trough, suited in size to the number of cattle needing water.

Suppose said stream should draw off seven barrels per day, the fountain would hold out one hundred days, or more than three months, without rain to replenish it. By letting the drainage from the whole five acres of surface into the cistern, it will not require a long or hard rain to fill it—and whereas a roof stops discharging into a cistern as soon as the rain ceases falling on it, this would not begin to discharge water for two or three days after the rain had fallen, and would run for several days after, as it would have to soak through two or three feet of ground and thus become completely filtered.

Through the greater part of the winter and spring, in this climate, the cistern would be full, while the water would pour out of the waste pipe at the top, and after this had ceased, there would be 700 barrels of pure, well filtered spring water, to be run off in a stream of any required size, which, if not too large, would not fail or stop running at any time.

If this cistern is covered with hewn or split timber, of large size and good quality, it would last a dozen years without repairs; if covered with stone (arched), and the pipes well put in, of suitable material, it would remain to bless mankind while "grass grows and water runs," and will afford water one hundred per cent. purer, cooler, better and more certain than open ponds, so often seen on elevated farms in the West, in which the hogs wallow and the cattle stand in a hot day, and fill with their excrements, till it becomes, during a drouth, a mass of filth, drank by animals only under stress of excessive thirst, when it can but engender disease and death to the beast and loss to the owner.

The man who would build such a fountain near the wayside in some shady nook, where the weary traveler could quench his thirst, would bring down blessings on his head, long years after the memory of his miserly neighbor had been buried in oblivion.

Cuba, Mo.

B. S. SMITH.

**A NEW WAY OF SUB-SOILING.**—If there is not time enough for thoroughly pulverizing the under-soil, run your sub-soil plow so as to leave a space between, that is, let your furrows (under) be 2, 3 feet apart. A sub-soil attachment to your cultivator, where the ground will admit, will do. This will, so far as the water is concerned, have the desired effect; and that, in the case of grain, is the thing aimed at. This will greatly lessen the labor; quite an important point in the hurry of seed-time. Sub-soiling is carrying out the principle of ditching—it is a successful species of draining; and a quarter of labor, in this respect, will answer all purposes. For grain, then, or slightly rooting vegetables, an occasional sub-soil furrow will do. But it should be made as deep as possible.

**THE POTATO ROT.**—At a meeting of the Farmers' Club, Mr. Carpenter stated: "I have read and observed a great deal on the subject of the potato rot, and the sum of the whole seems to be that potatoes planted in moist, tenacious soils are much more subject to rot than if planted in dry ground." Prof. Mapes remarked: "I had a field, half of which was under-drained, and I planted the whole to potatoes. On the under-drained portion none of the potatoes rotted, while on the other half they all rotted."

### TURNING UP UNDER-SOIL.

We have known land so top drilled that there was but little yield. One lot was over-run with weeds, and yielded little else. The owner turned down what sward there was, the plow followed by a horse and plow, thus fetching up and loosening the under-soil. This was better than plowing deep, as it mellowed the ground more; but it buried the sod deep. The result was, an excellent crop. The under-soil was rich, as was the upper soil in the start.

For corn, such a thing we have seen tried with the happiest effect, and seldom a failure; but the ground was plowed deep at one plowing, bringing up mellow soil exempt from roots, and generally exempt from worms. The corn roots will penetrate the deeply-buried sod and luxuriate in its rotten fibres and heat. In some sections of the country, this is the only mode of raising corn. In some localities of New York, we know of eighty bushels being raised to the acre in this way, and never less than fifty.—The one plowing is good; but it cannot be plowed so deep, nor will it be so mellow. In deep, rich soil, you cannot run your plow too deep; and early spring is preferable to fall generally. We have seen this tested side by side. In treating a soil in this way—a thoroughly mellow top-soil is the result—a matter of great importance.

W. I. T. S.

**SMUT IN WHEAT.**—Mr. A. Keller, of Raysville, Wis., writes as follows: "A subscriber calls for a preventive of smut, I will give a certain cure. This vicinity is known (or county rather) as one of the best wheat counties in Wisconsin, and the preventive is universally used. Having measured out the amount of seed to be dressed, dissolve 1½ ounces of blue vitriol, for each bushel of wheat, by pouring hot water on it, and, after dissolved, add cold water, so as to have two quarts of water to each bushel of wheat; let an assistant shovel over the wheat while the vitriol and water is sprinkled on. Shovel it over at least three times, sweeping up the scatterings each time, so as to wet every grain of the seed. I use six ounces of vitriol, put in a kettle on the stove, and when dissolved add to it and fill a common pail, and sprinkle four bushels at a time—the wheat takes up all the water; it can be done one day or twenty before seeding."—[Ex.

The curculio in the Eastern States is deprived of its prey. The strong winds which prevailed at the time of the insects' depredations, have prevented the usual harm.

### METEOROLOGY.

[An Essay read before the Meramec Horticultural Society, at its June meeting, held at Allenton, St. Louis, Co. Mo. By A. FENDELER.]

The changes of the atmosphere in regard (1st) to its disturbed equilibrium, as seen in the force and direction of the winds; (2d) its temperature; (3d) barometric pressure; (4th) electricity; (5th) aspect of the sky, whether clear or cloudy; and (6th) its moisture, whether uncondensed as mere humidity, or condensed into rain, snow, hail and dew, which together constitute the principle subjects of meteorology, being intimately connected with the operations of agriculture, it is not to be wondered at that the cultivator of the soil should be deeply interested in everything that is calculated to give information on so important a branch of knowledge.

Farmers and gardeners know pretty well by experience what state of the weather may be injurious and what state beneficial to their crops; but what they desire to know most, is: In the first place, can such or such a state of weather be produced artificially; secondly, how can certain bad influences of the weather on their crops be prevented or guarded against; and, thirdly, are there any sure signs and indications by which we may be enabled to know in advance the state of the weather that is going to happen, days, months, or years from now. And when we consider that there is a branch of the natural sciences, called *Meteorology*, which treats on the weather, we naturally expect to derive great advantages and profit from its study. This, no doubt, we will in a great measure; but if we expect to find all our queries answered, and think we can learn how to foretell the weather with unerring certainty, we will be sadly disappointed.

The great aim of meteorology so far, has been to get, in the first place, a perfect knowledge of all the causes and agencies that are at work, and in what precise manner these agencies act, in bringing about all the different changes and fluctuations of the weather. To do this, requires observation, not of one man or one mind, but of thousands of assistants in all parts of the world, who are daily employed to bring together the materials with which the master minds of science try to rear the stupendous structure that will one day be completed and shine in all its grandeur—one of the proudest achievements of the human intellect, and an everlasting monument to the industry, patience and research of man.

I say it will be completed one day—but that

day may be far off yet, and it may take generations yet to come to complete the work. Piles of volumes of observations have already been collected at the different headquarters of meteorology in all the principal civilized nations; they have been registered on land and sea in different parts of the globe. Those of the United States have chiefly been sent to the Smithsonian Institution at Washington, where they are compared, arranged, studied and digested, and recently have been given to the public in printed form in the monthly and bi-monthly reports of the Agricultural Department of this country. This is a most important step to awaken and spread a lively interest in these useful and valuable publications, even among non-agriculturists. To contribute our mite of observations to so grand a structure, ought to be a reward of itself. If we cannot assist in the capacity of chief architect, we may do it in an humbler position, and yet claim that we also have had a working hand in it.

As I have observed before, to bring the science of meteorology to completion, it requires that we know all the different causes that are at work, and in what manner they bring about the different changes in the weather. To be successful in our aim, observation alone, however systematic it may be, is insufficient without being directed by deductions and the knowledge of facts and principles which the meteorologist has to gather from almost every science—from Astronomy, Chemistry, Natural Philosophy, Geography, Geology, &c—all have to yield more or less from their stores, and to become auxiliaries to meteorology.

Before the more practical questions of the farmer can be answered, such as to the prediction of the weather, we have first to consider some of the general principles upon which meteorology is based, and to speak about the nature of atmospheric phenomena, in order to form a rational conception of the subject we seek to investigate.

The earth is enveloped on all sides by an aerial fluid, called the atmosphere. This aerial sea extends some 50 miles upwards from the surface of the earth, being densest at the level of the sea, and becoming attenuated very fast as we ascend higher and higher. Its density at the surface of the sea is about one ten-thousandth part that of mercury. A column of the atmosphere in its whole vertical extent, weighs as much as an equally wide column of mercury 30 inches high. The bottom of this atmospheric sea consists for the most part of

the surface of the liquid sea, called ocean, in other parts it consists of land in the shape of plains, valleys and mountains. This aerial sea is never at rest—it is always in motion more or less. Its motion is not only in one great body similar to the tidal swelling and sinking of the ocean, but also in narrow bands and wider sheets, which we call winds and currents of the atmosphere.

The air, apparently so thin and light, has, nevertheless, a weight greater than is generally supposed; for a cubic yard of it near the surface of the sea weighs about two pounds. Hence, when it is in motion, and strikes against an object with a certain velocity, it is capable of producing astonishing effects. Although the atmosphere extends to the height of 50 miles, yet the great body of it is less than four miles high, and as this is the denser portion in which most of the meteorological phenomena take place, it is that portion which we have chiefly to deal with.

Chemically, the atmosphere is constituted of two ingredients—nitrogen and oxygen, in the proportion of nearly one volume of oxygen to four volumes of nitrogen. Besides these two permanent gases, we find other emanations from the earth's surface mechanically mixed with them. There is, for instance, always to be found a certain quantity of carbonic acid gas, amounting to about 1-200th part of the oxygen and nitrogen taken together.

Of the different minor gaseous substances which thus are occasionally found in the atmosphere in ever-varying proportions, is one that deserves special mention, because it exerts an important influence on human health and life, and is supposed to be the cause of intermittent and malignant fevers. This substance is found in small quantities in certain low and marshy places, and has recently been recognized as a gas long known to chemistry under the name of carbonic oxyde, but not until now suspected of its vicious character, for it passed hitherto disguised under the collective and undefined name of malaria. Carbonic oxyde (not carbonic acid) consists of one equivalent carbon combined with one equivalent oxygen; while carbonic acid consists of one carbon combined with two oxygen, so that carbonic oxyde can be changed into carbonic acid by being combined with one more equivalent of oxygen. Its weight is somewhat less than that of atmospheric air. Ignited, it burns with a pale blue flame, and changes while burning into carbonic acid. It originates, in part, from decomposition of

vegetable matter, but is often carried along with humid air, by winds, to a considerable distance. The observation, however, has been made that this noxious gas is rendered harmless by passing through dense masses of green foliage. How it is rendered harmless in this way, I have never seen explained. The reason probably is, that the oxygen which is set free by the living laboratory of the tree through its leaves, combines, in its nascent state, with the carbonic oxyde to form carbonic acid, and as such can be used by the leaves as nutrient.

Of all the gaseous ingredients mechanically mixed with the air, there is one which exerts a most powerful influence on vegetation, in its volatile as well as in its condensed state. This is the vapor of water, invisible to the eye when uncondensed, and varying very much in different places, according as the place is situated near to, or far away from extensive bodies of water, and according to the temperature of that water; varying also very much in the same place from day to day according to the kind of wind that is blowing at the time—whether it is moisture-laden S.E. or a dry N.W. wind.

The air, like all other substances, takes up heat from neighboring bodies of more elevated temperature, and gives the same off again as soon as those bodies are removed—that is, it is capable of being heated and cooled. Heat and moisture of the atmosphere, are the most important meteorological elements, for they are most essential to the success of vegetation in general, and to agriculture and horticulture in particular.

The sun—the great luminary of our planetary system—is not only the great source of heat in the atmosphere, but he is also the mighty cause of changing the fluid particles of water from river, lake and ocean, into gaseous particles of vapor, increasing the tension of these particles, and hereby making them rise to greater or less heights. From thence, they are carried by the currents of the atmosphere far away from their starting point, sometimes thousands of miles before they are condensed again over some high mountainous district, where they fall as rain-drops to swell the little rivulets that send their waters back again by long, meandering routes into the ocean, the great reservoir of moisture from whence they came.

But the sun is not only the generator of vapor, he is, likewise, the dispenser and distributor of vapor, over the different portions of the earth. This may seem strange doctrine to some, for but a few years since an author in a

celebrated work on physical geography, has insisted that the atmosphere itself is the great mechanism that pumps up the vapors from the surface of the ocean and distributes them over the earth. But he held on to an antiquated and erroneous view, believing that the vapor is dissolved in and by the atmosphere, as one liquid is in another, not minding that Dalton and other physicists have proved long since that the vapor in the atmosphere exists in an independent state, save the inconsiderable mechanical adhesion which all bodies show more or less for each other, and by which each offers a slight mechanical obstruction to the free motion of the other. We know also that water in a vacuum or space void of air, evaporates as fast and even faster as in a space containing air. This evaporation will be greater in proportion as the temperature of the water is increased, and less as the temperature is lowered. The sun imparting heat to the water, generates the vapor and extends the latter in all directions, no matter whether the space above the water be void or filled with air.

But the sun is also the dispenser of the vapor; for if there was no heat to disturb the equilibrium of the different layers of air, the atmosphere would be stagnant and motionless—there would be no winds or currents of air. The heat expands and makes the air light and rising—while cold contracts it, makes it heavier and sinking. The heavier flows towards the regions of rarified strata, and the lighter air rises and is pushed along on the top of the denser strata. In this way winds of different velocities and directions are continually produced by the sun.

Between the tenth degree north and south latitudes, the sun is always more or less vertical, it is therefore in these latitudes that the strata of the atmosphere are heated more than in any other region of the globe. Being thus made lighter than the cooler strata of equal lateral tension of the neighboring regions, they rise and ascend until they arrive at a stratum of air that moves horizontally with considerable velocity, where their further upward progress is arrested, and they are then obliged to flow off into a northern direction where the air is colder, more compact, and hence more depressed. In their course northward, they get into latitudes where the earth's surface in its daily rotary motion describes smaller circles than at or near the equator, and having kept that greater eastward velocity received by the centrifugal force of the equatorial regions, they are compelled to take a course between N.

and E.—that is, they are deflected from their proper course north, more and more towards the east, and by the time they arrive in about lat. 30 or 35, they have not only lowered so far as to reach the ground, but they have acquired a course towards N.E., that is, they blow as a S.W. wind, or even W.S.W. wind.

Sometimes, however, it happens that this great equatorial current sinks down to the surface of the earth before it reaches latitude 30, and then it continues to blow as a south wind, because the obstacles of the earth's surface will not allow it to be deflected towards the east.—On the contrary, when the great equatorial current keeps in the upper regions until, on account of the convergency of the meridians it has to accumulate between latitude 40 and 50, its pressure finds suddenly vent by rushing to the attenuated atmosphere of the southern region, towards latitude 25 or 20, which is attenuated because it is the region that directly supplies with new air the partial vacuum produced by the ascending columns of the equatorial regions. In sinking down in the higher latitudes it shows its deflected course which it gradually acquired in the upper regions, first as a strong south-western wind, and in turning to the south it is felt as a western, and then as a north-western gale.

In thus rushing back towards S.E., this current sweeps generally along with fearful velocity. It is especially well defined and developed in winter, and known by the name of our "winter storms" or "north-western gales," which must not be confounded with another class of storms called, "tornados."

To be Concluded Next Month.

### CURING STRAW.

There is nothing that cures so finely as oat straw. A pale-green tint, like that of hay, and making it almost as good as hay, especially when cut by the straw cutter. The very smell is like the fragrance of hay. Then there is the berry—white, plump and heavy—heavier than when ripened too much. This seems strange; but it is true. We ripen too much. People are afraid to put the scythe in when yet quite green. Too often, however, will other work crowd the harvesting, till the straw is white and begins to break down. Mowed early; bound, or put up in cocks, a few days after—or sooner—and there left—the cocks with hay caps; or, if bound, in stouts crowned with a cap sheaf—for weeks or more. Then draw in. You will then be satisfied without further proof.

[Written for the Valley Farmer.]

### A Few Plain Words to the Farmer.

It is hard to reach the ears of all our farmers; and even if reached, it would be of but little benefit to most. Such is the unfortunate fact. There are many very ignorant farmers: and when people are ignorant, they are superstitious, bigoted. It is a hard word, especially when applied to them, so they would think.

To convince such farmers (and they are the majority), is impossible, save by this difficult method—the slow method of educating them—educating them not to farming, but generally. Educate the man mentally and morally, in what relates to good citizenship. Then he will be rational; then he will reason with you—otherwise not. And unless a man reasons, he is allied to the brute—he is stubborn—you can do nothing with him. Educate a man, then, first, not only as a farmer, but so that he is fit for any of the departments of life. You then can reach him, and readily. He has given up believing in the moon, and in signs generally. You will not find him at the fortune-teller's; you will not find him reading trashy novels. But you will find him with an upright look, more or less intelligent—this same man that you now see so stubborn. Reading agricultural papers alone will not reform such a man. There must be a reformation from the bottom.

But there are some who are more or less intelligent, who are yet in the old track of farming, who, with one foot stand upon the old traditions, and the other upon the pocket. These may be reached frequently through the pocket, that sensitive thing near a man's heart. Convince them that their pocket is filled by your course, and you secure their ear. You need not coax them. They will find you and beseege you. It is pretty much so with all people. The only point is, can you get their confidence? Convince a man that a hundred dollars laid out in draining, will soon be brought back by the increased benefit of the land and the extra crops, and he will pay the hundred dollars; or, if he has not the hundred, he will pay fifty; if not the fifty, he has twenty: he has something. So it is with the saving of manure; with the use of machinery; with the proper tilling and top-dressing of the soil; so with the management of stock, and a thousand other things—with everything relating to farming. But the man must first be convinced. Who can do this? who will? Who has interest enough in his calling? interest enough to raise a poor, wretched farmer to a successful one!

Scatter successful farmers among these men—one or two in a neighborhood—and you do much towards reformation. Here, example will have its effect. The most bigoted can hardly fail to see this. But respectable farmers are not apt to throw themselves in such neighborhoods; they prefer better company. B.A.

### Agricultural Items.

If you have a sub-soil plow, or can borrow one of your neighbors—take it and run it through a piece of your meadow; also through a piece of your corn and your potatoe field. Horses, one-before-the-other, will do it in the corn and potatoes. You will then see what benefit there is in stirring the under soil. Here the top-water will surely go, if the sub-soil plow is run through; and here the moisture will be retained in a drouth; and the thing will be a perfect security if the top is also mellowed.—Experiment is the key to all our improvement.

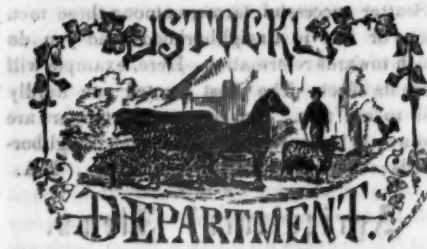
**TO DESTROY BEE MOTHS.**—Take a pan of oil or grease at the time the miller is ready to begin to lay its eggs, and insert a wick in the middle of it, and light about dark, set it near your bee-hives, and the millers will be attracted to the light, and being blinded by it, will readily drop in the grease and die.

The novelty of the season is the hay loader. It is fastened to the hind axle; and as the wagon moves—stradling the winrow—it picks up the hay and throws it on the wagon, about as fast as two men can load it—and that is about as many as can load to advantage.

**HOW TO CATCH FROGS.**—Take a good fishing pole, 15 or 20 feet long, with a good line attached, and fasten from 4 to 6 fish-hooks of medium size to the end of it by winding some cord around the hooks, so as to let them project all around the line. Tie a piece of red flannel three or four inches above the hooks; then let the line down in front of the frog, and he will jump up after the flannel and seldom escape the hooks.

The hay-spreader is a success.

Watering plants is a delicate operation. It would seem as though the least water, however applied, would be beneficial. But such is by no means the case. Unless your soil is very rich (in which case it needs but little water), a slight sprinkling will crust the ground. Copious showering is the thing; and then with as little volume as possible. Fine, slight sprinkling is the thing, continued till the soil is soaked. Then leave for a week or two.



### BREEDING—THE SEXES.

**ED. VALLEY FARMER:** It is often of great importance to stock raisers to be able to produce the sexes at will. Sometimes the farmer would prefer a bull, at others a heifer, and in a like manner of other domestic animals.

The accomplishment of this object has appeared of so much interest, that the science of all ages and nations has been taxed to its utmost to yield the desired result. From time to time theories have been advanced and experiments instituted to test their value, with more or less hopes of success. All had essentially failed; and many scientific men had fallen into the belief that this was one of the secrets guarded by an All-wise Providence from the meddling interference of man.

But the late discoveries, or rather ingenious deductions, from previous discoveries, by Prof. Thury, of Geneva, (see *Am. Journal of Science*, for July, 1864,) and the most successful experiments of Mr. Geo. Cornax, of the Canton de Vaud, Switzerland, would seem to prove that breeders may now obtain either sex at will in all the domestic animals, which usually produce but one at a birth, and have a well-defined rutting season; and with more or less certainty with those which produce more than one at a time, and have a well defined rutting season. If the statements of Mr. Cornax are true (and they come to us with every appearance of truth), Prof. Thury's discovery is a most valuable one, and I will give the "summary" of his deductions and "practical observations," without entering upon the facts and arguments by which he arrived at these conclusions.

"1. Sex depends on the degree of maturation of the ovum at the moment of its fecundation.

"2. The ovum which has not attained a certain degree of maturation, if it be fecundated, produces a female; when this degree of maturation is passed, the ovum, if fecundated, produces a male.

"3. When, at the rutting season, a single ovum separates from the ovary to descend slowly

ly through the genital canal (as in uniparous animals), it is sufficient that the fecundation takes place at the commencement of the rutting season to produce females, and at the end to produce males—the turning point of the ovum occurring, normally, during its passage in the genital canal.

"4. When several ova separate successively from the ovary during a single generative period [rutting season] (as in multiparous and oviparous animals in general), the first ova are generally least developed and produce females; the last are more mature and furnish males.—But if it happen that a second generative period succeeds the first one, or if the external or organic conditions change considerably, the last ova may not attain to the superior degree of maturation, and may again furnish females. *Ceteris paribus*, the application of the principle of sexuality is less easy in the cases of multiparous animals.

"5. In application of the above principle to larger mammalia, it is necessary that the experimenter should first of all observe the course of the phenomena of heat in the very individual upon which he proposes to act, in order that he may know exactly the duration and the signs of the rutting season, which frequently vary in different individuals.

"6. It is evident that no certain results can be expected when the signs of heat are vague or equivocal. This is scarcely ever the case with animals living in a state of freedom; but cattle in the fattening sheds or in the stable sometimes present this abnormal peculiarity. Such animals must be excluded from the experimentation.

"7. From the mode in which the law ruling the production of the sexes has been deduced, it results that this law must be general and apply to all organized beings—that is to say, to plants, animals and man."

It should be observed that it is very necessary to make a careful distinction between the law itself, which is contained in 1 and 2, and the applications of the law in 3-7 of the summary. For the law is absolute and infallible, while the application must, of necessity, be more or less imperfect and uncertain in its results.

In the application to mares, cows and ewes, which run out, there should not be much uncertainty, when but one young is produced. If the rutting season be carefully observed, and the male be presented at the beginning only, females may be expected; if at the close or near the termination of the season, only then males should be the result.

As respects swine and other multiparous animals, the results will, of necessity, be more uncertain. In fact, the application of this law, as given by the author (in 4 of the summary) every good physiologist will perceive is not so definitely stated as it should be, nor are all the facts taken into consideration, which might and usually would affect the results.

But the discussion of this law in application to the multiparous and oviparous animals, would make this article too long, and it will be deferred to some future time, and close with Mr. Cornax's experiments.

Mr. Cornax, writing from Montet under date of Feb. 10, 1863, says:

"I have applied to the management of my herd of cows the data furnished to me by Mr. Thury, and obtained at once, without any uncertainty, all the expected results."

"In the first place, in twenty-two successive cases I wished to obtain heifers. \* \* I obtained the desired result in all cases."

In seven cases he wished to obtain bulls, and they were obtained without an exception.

He concludes as follows:

"To sum up, I have made 29 experiments in all according to the new process, and all have given the desired product, male or female. I have had no cases of non-success. All the experiments were made by myself without the intervention of any other person.

"I can consequently declare that I regard the method of Prof. Thury as real and perfectly certain—hoping that he will soon be able to profit all breeders and agriculturists in general by a discovery, which will regenerate the business of cattle breeding."

This seems to be positive and satisfactory; but it should be remembered the experiments were made upon the cow only, which is perhaps the animal with which the principle could be most easily applied. Yet we ought to expect equally certain results with mares which run out.

Prof. Thury mentions one fact respecting domestic fowls, which may be useful. He says that "the eggs last laid nearly always furnish the cocks of the clutch."

Whether Prof. Thury's theory is correct, I am not prepared to say. So far as the subject has been examined, it does not appear to be inconsistent with any well established physiological principles. I have, therefore, given it for what it is worth—an experiment, a fair trial, by some of our cattle breeders. If true, it will be very valuable; if not, it has cost but little.

Yours, G. C. SWALLOW.

### CORN STALK FODDER.

The drouth of the present season has been unexampled in severity, and in the extent of country over which it has prevailed. The hay crop is very light, and the price will rule very high. It behooves the farmer, therefore, to save all of the available stock food he conveniently can. There is no farmer who has not a crop of corn coming on. If the stalks are cut soon after the kernels become glazed, and are put into snug shocks, and are then properly bound together, a most excellent winter fodder is provided for all kinds of stock. The cost is only a trifle—that of cutting and shocking—but the corn is saved in a nice condition, and the labor is well bestowed—if for no other purpose than in saving the corn and preventing it from the injurious effects of the weather and from the waste which follows if left as it usually is in the field on the stalks where it grew.

Cut the stalks early. The corn will yield as much, and we believe more, provided it has become glazed. The stalks and blades will be sweet and nutritious, and stock will eat them in preference to hay. We hope our readers will heed our advice, and lay in a good supply for winter.

**A HORSE STORY.**—The army correspondent of the *Herald* writes an account of the famous horse raid within the lines and without riders. He says:

Near Bermuda Hundred, there is a large corral, where all the disabled and worn-out horses—brought here by General Sheridan after his famous raid—are confined. The poor beasts have apparently but little of their original vigor left. That was what we thought a week or two since. Now we have changed our opinion. During the heavy firing on our right, a short time since, these lame and worn-out equine warriors pricked up their ears, straightened their sore and stiff limbs, tossed their manes, formed in squadrons, and with a loud snort charged on a number of inoffensive mules. Two mules were instantly killed, and the others fled in the wildest disorder. The horses again formed to the music of Gilmore's artillery, and charged on a high rail fence, which they at once broke down. They did not desist from their warlike demonstration until the artillery ceased firing.

Five quarts of milk make one pound of cheese. Fifteen quarts of milk make one pound of butter. This varies according to the manufacture and according to the quality of milk.

### BUTTER.

We yesterday visited our fruit woman in the country—and we there tasted of butter over a year old, made in June—the first half of the month. It was perfectly sweet and pure, and apparently as fresh as if made within a day.—We would have been incredulous as to the time—but the woman's veracity was beyond suspicion.

The thing was new to us, that butter made in June should be so much better, for instance, than butter made in October or the latter part of summer.

"But," the old lady said, "Mrs. Elwood used to always pack down a keeler full of butter that was made in June. She did this for many years; and there's where I learned it."

Now, that the butter is good—that it is a year old—that it was made in June: are all facts. Why, then, is not June butter made for winter use? Is the fact not known that it is better? We have seen hints in the papers to that effect.

The truth is, June butter is the best made—that accounts for it. The feed, *then*, is just the thing for a full supply of milk. The grass is sweet and tender—the weather is pure and cool—there is no difficulty with cellars and water—the churning is done readily, so that the globules which form the butter are retained whole, which gives a more ready chance for the milk to drain off—in a word, the pure butter is there, and pure butter will keep. June butter, then, for winter and spring use. F.G.

### SHEEP WORK IN SUMMER.

The sheep are now shorn, registered, marked, etc. Before they are considered prepared for summering, the following processes should be performed:

*Cutting the Hoofs.*—All Merino flocks require to have their hoofs pared at least once a year, though their feet may be perfectly sound. Otherwise, their long turned-up and turned-under hoofs collect filth—give the sheep a hobbling gait, and present an unsightly and un-farmer-like appearance. The hoofs cut far easier after a period of rainy weather. The long toes should be shortened as much as is practicable, without drawing blood. Care should be taken to preserve the natural bearing of the foot—not lowering the toe or heel, or either side, so as to throw the weight on any part improperly.

*Shortening Horns, Etc.*—If the horns of rams press upon any part of the head or neck, the inner sides should be removed by a saw. Ewe's

horns which threaten to grow into the head, should be sawed off, if small, close to the head—if large, as near the head as may be, without causing a large effusion of blood. A butcher's bow-saw is the best one for these purposes. It is becoming customary to twist off the horns of ewe lambs before they attain much size. Very little blood flows, and the operation appears to cause far less pain than docking.

*Maggots.*—On the densely-coated Merino when not sheared before hot weather, it is not uncommon to find, say, one sheep in a hundred with maggots under the wool where it has been kept wet and foul—generally about the vent or on the thighs. If they have not penetrated through the skin, carefully scraping them off and covering the part first with turpentine and subsequently with tar, is usually sufficient. But if they have burrowed into the flesh, the sheep should again be looked to within a couple of days at farthest—for the progress of these destroyers is signally rapid.

If rams fight, as they are apt to do immediately after shearing, and break the skin on their heads, maggots will soon be found about the roots of the horns—particularly when the latter press on the head, or when the narrow space between is left filled with wool. It is very well to smear the head back of the horns, at shearing, with tar softened with turpentine, in a strip, say an inch in breadth. Those kinds of fish oil which repel the approach of flies would be still better. Rams if kept together in July and August, require constant looking to in this particular. In the place of turpentine, some persons apply spirits of tar where maggots have been generated—others, corrosive sublimate.—The latter is dissolved in alcohol. And if the worms have penetrated deep and produced a very foul ulcer, it is more efficient than turpentine.

*Killing Ticks.*—Lambs should be dipped in some tick-killing solution, within a fortnight after shearing. A decoction of tobacco was formerly in exclusive use for this object—and refuse tobacco of various kinds is still employed in regions where the plant is cultivated. But good tobacco is too expensive, and its place is supplied by various washes sold for that purpose.

*Water in Pastures.*—We have already insisted that this was a matter of the highest importance—that it ought to be regarded as indispensable—in the case of ewes suckling lambs; and there is no doubt that it is vastly better for all sheep.

*Shade in Pasture.*—This, like the preceding, is very important for nursing ewes, and very advantageous for all other sheep. In a bare field, with no shade whatever but an ordinary rail fence, it "would pay" to construct artificial shades for ewes and lambs.

*Salt in Summer.*—Sheep should be regularly salted as much as they will eat, once or twice a week throughout summer, or else have salt kept constantly accessible to them. The latter would be decidedly best, did it not, during the busy periods of summer, tempt the flock master to neglect seeing his sheep. They ought to be carefully looked over at least twice each week—and counted as often, if pastured out of sight of the farm house, or in exposed situations.—Besides, sheep are kept much tamer, if frequently called about the shepherd by their desire to obtain salt.

*Prevention.*—Where the exciting causes of diseases are at work, there is a legitimate mode of prevention. It consists in removing the sheep, or in removing or neutralizing those causes. If land is too wet, for example, for sheep, it is sound practice to drain it. If we could devise any way to prevent the sheep gad-fly from laying its eggs in the nostrils of the animal, it might be desirable to do so. If proper food—that is a portion of green food in winter, will prevent colic in sheep, we should give it to them. If tar or fish oil near a wound, will repel the flies from that wound, it is prudent to put them on parts of sheep particularly subjected to wounds. All this is simply proper management. It does not come in the category of drugging and dosing healthy sheep.

A healthy sheep requires nothing internally, but proper food, drink and salt. Salt is a condiment as much adapted to its instinctive appetite and desires, as its food. Nature, therefore, proclaims its usefulness to sheep, even in health—but she makes no such proclamation in respect to any other substance which is included in the list of preventive medicines.—[*Rural N. Yorker.*]

The other evening a valuable mare belonging to Mr. Richards, farmer, of Ladock, Cornwall, broke over a fence into a garden, and upset a couple of bee-hives. A vast number of bees at once stuck to the animal, and stung her so severely that she died in a few hours.

To prevent horses over-reaching in traveling, let the blacksmith make the heel corks of the fore shoes high and the toe corks low; and the toe corks of the hind shoes high and the heel corks low. An infallible remedy.

### SHOULDER SLIP.

A very common disease of young farm horses is one known as shoulder-slip. This is called *Sweenie*. This disease arises from a sprain of the muscles of the shoulder, especially those situated on the external surface of the scapula or blade bone.

The muscles, from being sprained, gradually waste, until a hollow will be observed extending from the upper to the lower part of the shoulder. In other cases, when the sprain is severe, the shoulder joint appears at every step to slip outwards, and often leads to the belief that the shoulder joint is dislocated. Such, however, is not the case, but the slipping outward is caused by the external muscles being injured, incapable of performing their functions, and not able to counterbalance the contraction of the uninjured muscles situated upon the inner side of the blade bone. Shoulder slip occurs most frequently in young horses, and often results from their placing their feet awkwardly when first put to plowing. Those horses are specially liable to it who work with energy, and whose frames are but imperfectly consolidated. At times, the first symptoms observed is the gradual wasting of the muscles, which, in many cases, increases to such an extent that the ridge of the shoulder blade may be readily felt. In the majority of cases, the shoulder will be observed stiff and slightly swollen. This symptom soon disappears, and the muscles begin to waste.

This spring we have observed a great many young farm horses affected with shoulder slip, caused in a great measure by the horses being rashly put to hard work, and when not in good condition to stand severe exertion.

It is not uncommon for young horses to be kept constantly in the stable during the winter, and in a backward spring, like the past, when every available hour is required to push forward the operations of the farm, they are at once put to the plow or harrow without any preparations to put them in anything like working condition, and forced to do as much work as an old and seasoned horse. The muscles are soft and flabby and consequently are liable to be sprained.

Shoulder-slip in general is easily treated, but necessarily requires a length of time to restore the parts. In order to a cure, perfect rest must be allowed. In the first place, hot fomentations are useful. In about two or three weeks a stimulating liniment or mild blister should be applied, repeated at intervals of ten days

or two weeks. The animal should be well fed, and after a time allowed gentle and gradually increasing exercise. Severe irritant dressings, such as are often had recourse to, are not needed, since mild applications are more efficacious and certainly more natural. It is not uncommon to observe blemishes on the shoulders of horses caused by the irritant dressings being too strongly applied for the cure of this disease. Sweeney, is the name generally applied to this wasting of the muscles, and almost every horseman has a specific for its supposed cure. Many a poor animal is subjected to a species of torture by the application of these nostrums. In old horses, the muscles of the shoulder sometimes waste from prolonged lameness in other parts of the leg and foot. This is a marked symptom of a common disease of the foot known as navicular disease, and arises from the animal, in trying to save his foot as much as possible, failing to throw these muscles so forcibly into action, and as a consequence they atrophy. In such cases it is useless to direct treatment to the shoulder.—[Ex.]

**BOILING FOOD FOR HOGS.**—At a recent meeting of the Farmers' Club, Prof. Mapes made the following remarks in regard to boiling food for hogs:

"The proof of the saving of food by boiling has been given here, and as it can be stated in a very few words, we may as well have it. Mr. Mason was a watchmaker in Camden, N. J., and among other fancies he liked to keep hogs. He had his hog pen just back of his shop, so that he could sit at his window and watch his hogs. Every spring, he bought some pigs and fed them through the season. Just opposite to Mr. Mason was the store of Mr. Van Arsdale, and every pound of food that Mr. Mason gave to his pigs he bought at this store. At the end of six months, he got his bill from Mr. Van Arsdale, and he always slaughtered his hogs at that time, so that he knew exactly how much his pork cost. For several years it figured up about thirteen cents per lb. At length some one advised him to boil his corn. He accordingly got a large kettle and cooked all the food which he fed to his pigs. Then his pork cost him 4½ cents per lb. We also had the experience of Mr. Campbell, which was about the same as Mr. Mason's. Henry Ellsworth made some extensive experiments in the same direction, and his statement is, that thirty lbs. of raw corn make as much pork as thirteen pounds of boiled corn."

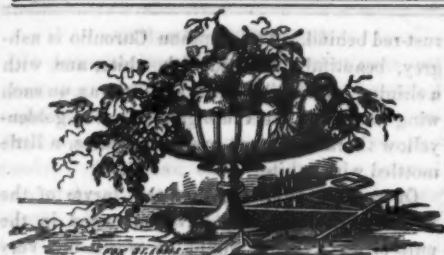
**HORSES SHOULD BE EXERCISED DAILY.**—Horses require daily exercise in the open air, and can no more be expected to exist without it than their owners. Exercise is an essential feature in stable management, and like well-opportuned food, tends alike to preserve the health.

Daily exercise is necessary for all horses, unless they are sick; it assists and promotes a free circulation of the blood; determines morbid matter to the surface; develops the muscular structure, creates an appetite, improves the wind, and finally invigorates the whole system. We cannot expect much of a horse that has not been habituated to sufficient daily exercise; while such as have been daily exercised and well managed, are capable of great exertion and fatigue, and are ready and willing to do our bidding at any season. When an animal is overworked, it renders the system very susceptible to whatever morbid influences may be present, and imparts to the disease they may labor under, an unusual degree of severity.—The exhaustion produced by want of rest, is equally dangerous; such horses are always among the first victims of disease, and when attacked, their treatment is embarrassing and unsatisfactory.—[Horse Owner's Book.]

**TO KEEP FLIES FROM WORKING CATTLE.**—Take a piece of scantling 3x4 inches, and a few inches longer than the yoke. Through this bore four holes to correspond with the bow holes in the yoke. Have bows long enough to extend five inches above the yoke. After the oxen are yoked, put this piece on the top of the yoke, letting the bows come through the holes. Bore several small holes in the sides of the above piece, and fasten in a brush long enough to reach the oxen's hips. The brush should be of some tough wood with the leaves on. When it is worn out, put in more. Some use blankets for their cattle while working, but it makes them unnecessarily warm, and costs something at present prices. The motion of the oxen while walking will keep the brush waving about enough to keep the flies off.

**TO PREVENT HORSES RUBBING THEIR TAILS.**—Wash the tail clean with Castile soap; then bathe it several times with vinegar, and a cure will generally be effected. If you can tie the horse so that he cannot back up against anything to rub it, so much the better.

Less land, more pains bestowed in cultivating it, and a variety of good stock, will be found highly profitable.



## HORTICULTURAL.

### The Large Striped Pearmain Apple.

We see a communication from Jno. H. Tice, of St. Louis, in the *Country Gentleman* of July 14th, describing an apple left at this office, by Col. Park, of Parkville, Mo., and exhibited by us, for him, before the St. Louis Horticultural Society. We also forwarded a couple specimens of the apple to Dr. John A. Warder, of Cincinnati, Ohio. A couple of years ago, we procured specimens of the same apple from Gasconade Co., Mo., and sent them to Dr. Warder. They have been sold quite largely in this market for a number of years. Why it is called a "New Apple," we are unable to say. It has been largely grown in Kentucky and Indiana, as well as this State, for a number of years. The true name of the apple, is that at the head of this article—the *Large Striped Pearmain*. The trees can be obtained at some of the Kentucky and Indiana nurseries.

The apple is really a good one, excellent in quality, and fine for shipping. We never before heard of the apple being designated as the "Missourian." We ought to be very careful about the names we give to fruits. Our fruit books are already full of synonyms. Mr. Tice nowhere gives the true name of the fruit.

Dr. Warder is very familiar with this apple, and thinks it deserves general cultivation.—When will the Doctor get out his *Fruit Book*? When that is issued, it will take a good many kinks out of our pomological dialect. It seems to us that this is a good time to issue the work. Every Western Fruit Grower is eagerly looking for its appearance.

**SETTING OUT FOREST TREES.**—In setting out trees from the woods, especially when of some size, remove all limbs; keep none on for ornament. Shorten the bole—be not afraid you will get it too short, if you look to the safety of the tree. The object is to keep the tree alive, and give it a good growth. After that prune to suit your fancy. How almost universal it is to not prune close enough when transplanting. G.

[Written for the Valley Farmer.]

### The Four-Humped Curculio — A New Foe of the Apple.

BY BENJ. D. WALSH, ROCK ISLAND, ILL.

Fig. I.



Fig. II.



I have long been aware that the insect shown in the cut—the *Anthonomus quadrigibbus* of Say—infested the fruit of the crab tree; but my friend Mr. Wm. Cutter, nurseryman, of Beverly, Ill., was the first to discover that it attacks the tame apple. He has sent me several specimens, both of the insect itself and of the apples punctured by it, with the following statement:

"The first we noticed of them, was on the 26th of May, when they had marked but little of the fruit. To-day (June 12th), they have punctured full one-half of it on trees of ours that promised 10 to 15 bushels this year. On the low limbs, hardly an apple has escaped them, many having eight or ten holes in them; but on the top branches, there is scarcely a single apple touched. To-day, it was no trouble to find ten or twelve of them by looking over the trees; so we tried shaking them on to a sheet, but found it impossible to jar them off. Full one-half of those we find, have their long snouts plunged deep into the fruit—and we have noticed six on a single tree. The holes they make are perfectly round, and appear to be made for the purpose of eating, as we can see no eggs in them. There are no crescent-shaped marks on the apples, such as those made by the Little Turk, and our apple trees seem to be entirely clear of all Turks and Gougers except this one sort. We think we see some signs of their work on pears—but cherries, and what few peaches we have, are not touched by them. Last year, our apples were badly damaged by a worm that appeared to enter at the calyx—but we do not think these chaps have anything to do with them."

The worms spoken of above, as entering at the calyx, were undoubtedly the larvae of the common Codling moth — *Carpocapsa pomonella* — a small miller which was long ago introduced into this country from Europe, and has now spread over the whole valley of the Mississippi.

One of the apples sent me by Mr. Cutter, contained in its core a dead larva of this moth, besides two or three perforations made by the "four-humped Curculio;" hence, it is probable that part of the damage done him this year is due to the Codling moth, though, no doubt, this curculio is the principal culprit.

The holes bored by this new pest of the apples, are no larger than pin-holes, and occur indiscriminately over the whole surface of the apple. They are about as deep as the beak of the insect is long, and almost always are greatly enlarged inside, so that the entire perforation is gourd-shaped, with its walls much browned and discolored. I could discover no eggs or larvae in the specimens sent me by Mr. Cutter, which contained, in all, about eight or nine perforations, and lay unexamined for two weeks; but having, to-day, gathered 30 or 40 crabs perforated by the same insect, I have found at the bottom of eight of the holes a transparent yellowish egg, 1-20th of an inch long, twice as long as wide, and rounded at each end; and at the bottom of three of the holes a young larva, evidently that of this same curculio, and not more than two or three days hatched out. On the other hand, in the same lot of crabs, full three-quarters of the holes contained neither eggs nor larvae. Whence it results that most of these holes are bored, as Mr. Cutter suggests, "for the purpose of eating," and eggs are deposited only in a few of them.

Similarly the "Plum-gouger"—*Anthonomus prunicida*—a new species which I discovered last year to attack the plum in the Valley of the Mississippi, in the same manner as the Little Turk, and to fully as great an extent—deposits its eggs in perforations like pin-holes and in addition gouges pieces out of the external surface of the plum for food.

In the eyes of an entomologist, these three insects—the common Curculio, the Plum-gouger, and the Four-humped Curculio—appear as distinct as cows, sheep and goats would appear in the eyes of a farmer. Anybody can readily distinguish them by the following characteristics. The snout of the first hangs down like the trunk of an elephant, and does not admit of being stretched horizontally forwards, out, can be folded back between its legs, where there is a groove to receive it; the snout of the other two is stretched out nearly horizontally in front, and does not admit of being directed backwards. Again, the back of the Plum-gouger has no humps or elevations whatever, while that of the Four-humped Curculio, as its name indicates and as the cut shews, bears four very remarkable humps, which are not so obvious when viewed from above (Fig. 1), but which become very conspicuous when viewed in half profile (Fig. 2). The general color of the last-named insect is a dull ash-grey, varied with whitish, and shading into

rust-red behind. The common Curculio is ash-grey, beautifully marked with white, and with a shining hump, like black sealing-wax on each wing case, and the Plum-gouger has a golden-yellow thorax, and ash-gray wing cases, a little mottled with white.

Of course, after eight or ten larvae of the Four-humped Curculio have burrowed in the pulp of an apple, it would be worth but very little even for cider. How long the perforated apples hang on the trees, I do not know, but from the analogy of the crab tree, I should conclude they do not fall till towards the autumn. The full-fed larva then, no doubt, burrows into the earth, to re-appear next summer in the form of the perfect beetle and sting a new generation of fruit.

Further observation and experiment will be required before we can talk of any effectual remedy against its depredations. Science, however, at once indicates the preventive, if not the cure. Do not allow the perforated apples to be any length of time on the ground, for the larvae to leave them and retire into the earth; but either burn them, or feed them out at once to stock.

It only remains to add that the Four-humped Curculio is stated, by Say, to occur generally in the United States, and that probably many of the statements of the common Curculio or Little Turk depredating on the apple, are properly referable to this insect.

[Written for the Valley Farmer.]

"HORIZONTAL TRAINING."—In the *Valley Farmer* for July, a writer attempts to controvert the facts set forth by me in my comments on an article some months since, in which he asserted that the growth of a vine or fruit tree was promoted by horizontal or downward training, particularly of fruit trees, in consequence of the increased flow of sap, aided and induced by the force of gravitation upon the circulating fluid—when every gardener of the least pretensions to intelligence knows (and practices accordingly) that by bending a limb horizontal or downwards, the growth of wood is checked and fruitfulness is promoted. The facts set forth in my article alluded to, are sustained by every vegetable physiologist, who has written upon the subject within the last century.

I regret that I am not now in a condition physically, to set the matter right, by giving the highest authority upon the subject, both in this country and in Europe.

The writer neither gives facts nor arguments to dispose of my statements. H.P.B.

**STRAWBERRIES.**

If you wish for strawberries next year, set them out now—in August or September—and water well. When we say, water well, we don't mean sprinkling, or even showering profusely. We mean this—mellow the ground around the hills, say for a foot or more. Stir it well. Then take soft water, if possible, and having warmed it in the sun, apply it at evening. Go from hill to hill and repeat. Keep doing so till each hill has received several gallons of water. You can then leave your strawberries for a fortnight to the drouth, and will find that they are growing nicely. If your soil is not rich—quite rich—add a little well-rotted manure to the water, and stir thoroughly—this is liquid manure. Of course, you would not go to all this trouble for a large patch of ground—only for a garden patch for family use. In setting out, you have had directions before. Without the thorough watering we have indicated—and that repeated, if necessary—your plants will die—the drouth will kill them. Remember, little sprinkling, even if indulged in often, will not save them, unless aided by rain. P.G.

**KEEPING FRUIT.**

We ate our last Spitzenberg to-day (June 23), and it was in pretty good condition, resembling a Seek-no-further when in prime order. Greenings may be kept till the advent of early fruit. The secret is—temperature, the hydrometric as well as the thermometric—in other words, the dampness and the heat of your room or place where you keep your fruit. A cellar will do very well. But you must avoid the too dry—and you must avoid the too wet; else your apples will shrink when too dry, or rot when too damp. This has been thoroughly demonstrated, and is a fixed fact. But this is only half of it. Your cellar must be cold—there is no getting round this. Unless cold, your apples will not keep. If warm, they will ripen, become mellow, and lose their flavor, ending in rot. If thoroughly cold—at the freezing point, or a little below—they will remain as they are as long as you keep them, in that temperature, if it is a year, or two, or three. If thus kept cool, they will never rot—never ripen. They will keep their acid, unripe condition. And it is just so that you want to keep your fruit that is intended for spring and summer's use. When the warm weather comes, the fruit then will begin to ripen under the mellowing influence of the heat, which cannot be kept thoroughly excluded. But—and here is

the point—you can regulate your windows so as to have a sufficiently cool temperature to keep any winter fruit till June. That is what we are doing now—what we have been doing for years. And now we will tell the reader how this is done: *Open your windows when the weather is cool, and close them when it turns warm—that is the whole secret.* In the cool nights which sometimes bring frost, the windows should be thrown open—door also if possible, if an outside one. When the weather begins to change, close at once, and keep your cool, pure and healthy air. Closed a week or longer, will not hurt the air. Especially keep closed tight when the warm winds blow. If kept open, they will, in a short time, drive out all the cool air—and your apples might as well be in your room or out-doors. The thing has been thoroughly demonstrated—thoroughly tested by us, and we know whereof we speak. Neglect will surely rot the fruit by spring. Care will keep it three months longer.

"But who would bother in this way?"

We answer, the man who wants to have fruit, and who isn't too lazy to have it. Thus, there are many men who have it—and there are many who have it not. There are many men who have but few things they ought to have. But many men do not know how to keep fruit, or they would keep it.

Gathering fruit also is a thing connected with keeping it. It should be gathered when just ripe, or nearly; a little lack is all the better for long keeping. When carefully picked, and sorted while picking—by all means, as it requires no more handling, and handling hurts the keeping property, that is, interferes with the oily deposit—then store in an out-building, but by no means in the fruit-room or cellar: avoid the cellar then by all means. Put in barrels or boxes, and do not close. Keep thus for a week or more. By this time the sweating operation will have gone through, and apples dry. Then close up, leaving, however, some vent, say a space amounting to two inches in width across the head of the barrel. Keep standing till late in the fall or the commencement of winter—as long as you can without serious danger from frost—and apples will stand a good deal of frost—permit even a little to enter without injury, if slowly and gradually let out. Then remove to the cellar. What you want to use soon, you must keep in a warmer place to ripen. P.G.

An unjust acquisition is like a barbed arrow, which must be drawn backward with terrible anguish, or else it will be your destruction.

**THE PHILADELPHIA RASPBERRY**

We have, on several occasions alluded to this fine raspberry, (says an exchange), giving, in addition to our own, the evidence of Mr. Wm. Parry and others in its favor. Every day convinces us more fully of its merits, and of its strong claim to general cultivation. We visited the grounds of Mr. A. L. Felton a few days since for the purpose of giving it a somewhat closer examination, as Mr. F. is growing it largely, having determined to pretty generally discard all the other varieties, and give his attention wholly to the Philadelphia. The appearance of the plants and fruit exceeded anything we had ever seen. The stalks are stout, stiff and branching, standing perfectly erect, and more nearly approaching the tree form than any other variety with which we are acquainted. The entire plantation was heavily laden with the green fruit, giving promise of an extraordinary crop, and fully sustaining the assertions of those who claim that it is the most prolific raspberry known. It is of a purplish red color, high flavor, of good size and medium early. Being perfectly hardy, and requiring no extra culture, its claims to general introduction both for private and marketing purposes, are of the strongest character. For the latter purpose, it is especially well adapted, as it bears transportation long distances without injury. As before remarked, it is "as hardy as an old oak tree," and a constant and most abundant bearer. Mr. Parry states the results of two pickings to be at the rate of 200 bushels to the acre. These statements of its merits not being based upon mere theory, but as the result of a number of years of actual practical experience, we feel perfectly safe in recommending the Philadelphia Raspberry to all who desire a perfectly hardy and most prolific variety.

**MOCKING BIRD.**—We see in the *Country Gentleman* of July 14th, a communication from Edgar Sanders, of Chicago, stating that a pair of mocking birds have taken up their abode in his garden, and are building a nest, &c. He asks if it is a rare thing to see them so far North? Mr. Sanders is undoubtedly mistaken about their being the well-known Southern Mocking Bird. They are never known to come so far North as St. Louis. The brown thrush, resembling the mocking bird in size and appearance, has misled Mr. S. They mock and sing very well, but not equal to the real mocking bird. The brown thrush are very abundant here, and make the groves musical with their melody. They imitate a great number of birds.

[Written for the Valley Farmer.]

**Rich Soil for Strawberries.**

Manure is generally wanted in strawberries. It is wanted on account of the teaching of strawberry growers themselves. They say not too rich a soil for strawberries—corn-ground, for instance, will do.

This is a mistake. We say it unqualifiedly. Strawberries want good ground—not a heap of manure, which grows nothing—but well-enriched soil. Do not be afraid to apply manure plentifully. Particularly mix up and pulverize your soil thoroughly. Get it rich and mellow, and deep—the roots penetrate. You are then good against a drouth, the great enemy of strawberries. Ground with but a small proportion of clay, a good predominance of chip-manure, or muck, with some sand, and much manure, is the ground. It is of course to be dry. If not—make it dry by draining. Then run your spade a foot and a half into the soil; and deeper still, if possible—the deeper the better against a drouth; the deeper the better against wet. If all this trouble is too much, then keep away from the strawberries. Without attention, they will surely fail, unless the year is unusually favorable.

With such treatment as we have indicated, strawberries can be raised for several years from the same patch. A little manure added yearly—in the form of liquid manure—will greatly improve the chances, for the manure added, is so much changing the soil. It is manure that does it in the vegetable world. S.

A tree grows through the roots. The numerous buds push forth, and there is the tree. You have it in your power how this tree shall be formed—by pinching this shoot and favoring that, or removing this. In this way, how beautiful the order and arrangement of tree growing. And yet how we neglect our trees! let them run at random; and the country at large tells us too much what this random is.—Poor, neglected trees! when they might be such fine, agreeable sights, and just as useful as fine.

There is no egg so fresh as that from the farm. There is no milk so rich as the farmer's. No water so pure as from the spring or well where no city streets foul it. No health so good as the farmer's—no life so free from offense.—How he sleeps! how he enjoys his meals! what an air he breathes! What an independent life he lives; giving bread to the world!

### ORCHARD CULTURE.

The following article was read before the American Pomological Society at its meeting in Boston, by the noted horticulturist, John A. Warder, of Cincinnati, O.

"After the trees have been well planted in their new home, it becomes an important question to decide what shall be the most appropriate culture to bestow upon them. The practice of some would-be orchardists, is that of no culture; which, with the usual neglect that accompanies such treatment, is certain to end in disappointment from the loss of trees; for no matter how good the selection may have been in the nursery, nor how thorough the preparation of the soil, nor how careful the planting—the young orchard will never develop its highest degree of perfection if left at this stage of its progress to take care of itself. If neglected now, it will go back and prove a failure, as any one may have seen who has observed the thousands that are thus sacrificed annually in various parts of the country.

It being conceded that thorough culture is necessary for the proper development of the young trees, it may next be asked whether any other crop should be planted in the orchard.—The answer to this question will depend upon the condition of the soil as to fertility; if poor, it will not do to rob the trees which constitute the main crop—but it is seldom the case that such poor land is selected for an orchard; generally our soils are sufficiently fertile to admit of cropping, at least partially, between the trees, without injury to them. Most writers advise the planting of a hoed crop, and prohibit altogether the sowing of grains among the trees. This is not without reason, for the long period between seed-time and harvest that the soil about the roots has to lie without the disturbance of the cultivator for the admission of air and moisture, causes it to become compact and dry, and the trees must suffer.

The partial culture with the spade immediately around the trees, which has been proposed as a substitute for thorough culture, is very seldom well done, nor to a sufficient extent, and is generally neglected entirely, so that the poor trees are not only robbed by the surrounding grain crop, but, worse than this, they are imprisoned in the hard soil, which is left after harvest in a condition unsuitable for plowing, and the drouths of summer continue to injure the trees. Such crops as require and admit of the occasional use of the plow and cultivator among them, enable the farmer to keep the

soil loose and mellow among his trees; this is the reason such should be selected for planting in a young orchard; these are called hoed crops. Some persons prefer those that are of a low growth, such as potatoes and beans; others think that Indian corn is the very best crop, and suggest that the shade cast by it upon the ground about the trees, and the moisture attracted by the leaves, which often falls to the soil, more than compensates for the injury caused by the corn roots absorbing the moisture below.

Whether we plant any other crop or not, let it be distinctly understood and constantly borne in mind, that the young trees must be cultivated; the soil must be constantly stirred and kept clean, until the orchard has fairly got under way with a thrifty growth. This is best effected by continuing the culture some years, and, as men are often unwilling to work without an immediate return for their labor, the naked fallow among the trees will too often be neglected, but the partial crop between them is an incentive to giving the orchard just such attention in the way of cultivation as it requires.

The length of time that this culture should be continued, will depend upon the condition of the trees, and the character of the soil and surface. The orchard should have assumed the most thrifty growth, before the cultivation is suspended, whether this may have required three years of culture or six; but on hilly lands, with a soil disposed to wash into gullies, we cannot continue the plowing with impunity, but must use such an alternation of crops as will obviate the necessity for constant open culture. This may be arranged by a rotation of clover with corn or potatoes; a valuable alternation it is, since this legume is itself almost a cultivator of the soil, rendering it loose and mellow, while at the same time the surface is clothed, and the soil is bound together by its roots; moreover, this plant attracts much of its sustenance from the atmosphere through its abundant foliage, and the radicles sink deep into the sub-soil in search of nutriment.

The clover may be sown at midsummer, after the last plowing of the corn, with or without rye, which last is only used for the sake of clothing the surface, and preventing the washing of the soil, and should be pastured by hogs the following season—let it by no means be harvested. After one year, the clover should be again plowed in; and the cultivation of the young orchard should be continued until the trees be well established, when the land may be again laid down to clover, or clover and or-

chard grass, and be allowed to continue in this condition for an indefinite period, or until plowing appears to be again required.

The above remarks as to the treatment of the young orchard, apply to soils of average fertility. There are portions of the country where the growth of orchard trees is too rampant to permit an early productiveness of the trees; this early bearing is a great desideratum in a new country, and with an impatient orchardist; as a mere matter of financial calculation, it is also a question of some moment. As a general rule, the more thorough the culture of the young trees; the more rapidly they are developed to their full extent: the more satisfactory will be the ultimate result in large crops of fine fruit; while all plans that force the trees into a premature fruitage, must have a tendency to produce early decrepitude.

But the encouragement of wood growth must not be continued too long, since it is the antagonist of fruitage; it must be subdued and brought within certain limits to insure abundant crops—though it should never be altogether suspended—the growth of the tree should continue with the production of fruit. In some soils it has been necessary to curb the excessive production of wood, by discontinuing the cultivation of the soil, and laying down with blue grass, which makes a close sod, and thus checks the growth of the trees, forcing them into a fruiting condition. Every orchardist must decide for himself whether the orchard of large trees, capable of bearing larger crops at a later period of their existence, is to be preferred to that containing smaller trees bearing a crop within a few years from planting, and continuing to be productive for a considerable period, even though the trees should never attain the large size that is so much admired, nor continue to be productive so long as the other.

In our age and country, the now—the immediate return of profit from the investment—is the great desideratum with most of us, and many people will prefer to treat their orchards in such a manner as to insure early productiveness, trusting to the future for the supply of fruit for future years. On this account we find that the early producing varieties are always inquired after and often preferred by orchardists, though the fruit be of inferior quality to that produced by trees of the varieties that are longer coming into bearing.

A pleasant sight—an unexpected strawberry patch in a clean, Timothy field. It reminds you of more than one thing.

[Reported for the Valley Farmer.]

### Meramec Horticultural Society.

BURKUM, July 7, 1864.

The 57th monthly meeting was held in the house of Mr. Rufus A. Lewis. President Beale in the chair.

The Secretary read the following circular from the Commissioner of Agriculture:

WASHINGTON, D. C., June 20, 1864.

The following is a copy of the law recently passed by Congress, restoring to this, with other Departments, the full franking privilege, by which it will be seen that no prepayment of postage is required in addressing small parcels, seeds, cuttings, &c., to this Department. An act in relation to franked matter.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That all communications relating to the official business of the Department to which they are addressed, of whatever origin, addressed to the chiefs of the several executive departments of the Government, or to such principal officers of each executive department, being heads of Bureaus or chief clerks, or one duly authorized by the Postmaster General to frank official matter, shall be received and conveyed by mail free of postage without being indorsed "Official Business" or with the name of the writer.

Approved, 1st June, 1864.

The Secretary called attention to the fact that the meeting of the National Pomological Convention was announced to take place commencing on the 13th of September, being the same week on which this Society had agreed to hold their annual exhibition.

Whereupon, it was, on motion, Resolved, That the annual exhibition of this Society be held on Thursday, Sept. 8.

The Fruit Committee reported on the table—Early Harvest Apple, by R. A. Lewis, and Red June by Wm. Muir, both having the marks of premature ripening from the effects of insects. Doyenne d'Ete pear by Wm. Muir, prematurely ripened, about half size; tree much affected by blight and insects. Also, Whitesmith, Wellington's Glory, Labesume, Houghion's Seedling, and American Seedling gooseberries, by Wm. Muir, not quite ripe, but all fine specimens, perfectly healthy in fruit and plant.

The Flower Committee reported that the Department under their charge had suffered severely from the cold winter and drought, but find fair collections in bouquets by Mrs. Dr. Beale, Miss Mattie Lewis, and a fine collection of wild flowers by Miss Mary Holloway—the want of a greater variety of hardy flowering shrubs and perennial plants, being much felt among us at present, and well merits the attention of the Society.

The Vegetable Committee reported specimens of the White Sprout potato by L. D. Votaw, large and truly fine, but having begun a second growth in consequence of the extreme dryness of the season and the recent rains. Also samples of the Dwarf Green Mammoth pea by Wm. Muir, a large, rich and tender variety, very strong and vigorous grower, vine about two feet high, productive and keeps long in season.

The Executive Committee reported the following as a subject for the next meeting—"The advantages derived from our meetings in a social point of view," and earnestly requests the ladies to participate in the discussion of the subject, either orally or by written communication, and that the ladies offer a subject for discussion at the September meeting. Adopted.

After dinner the discussion of the order of the day: "The experience and observations of all the members in regard to the effects of the late cold winter on vegetation in our district."

The President thinks the quince has suffered most with him next to the peach. The peach tree has not suffered so much as he expected, as more or less of them die every year.

L. D. Votaw—Sweet cherries have suffered most

with me. Have lost a large number of newly planted apple trees; thinks the roots were injured before he got them; pear trees will recover.

Col. Johnstone finds many of the trees at his place injured; the peach in wood and fruit; so with the pear; the apple and plum in the fruit only; the fine cherries have perished; pear trees seem as if blighted.

Judge Tippetts finds but little fruit of any kind; apple trees generally healthy.

A member stated that he had found almost every part of vegetation affected by the late winter. The circumstances attending the ungraded severity were in themselves remarkable, the mean temperature of the six days preceding the change, was 37<sup>th</sup>° Fah., and had been as high as 54°, the wind being chiefly in the S.E., but the wind suddenly changed to the North and N.W., and the temperature fell, till at 7 A.M. of the first January, it was 18° below zero, and had been as low as 32°. The question at once presented itself, We shall be able to ascertain how low a temperature the vegetative principle can endure without the destruction of the integrity of the wood or the organic functions. It is yet too early in the season to judge of its full effects. In taking a cursory glance, however, we find the grape has had its buds killed in 59 varieties, and were intact in four varieties—Clinton, Iden, Waterloo, and Osark Seedling—and this in every locality, with only one reported exception. We have seen it, and examined the vines and fruit trees at the highest points in this county, and at Gray's Summit in Franklin county, and find it the same, unless in some instances of careless culture or utter neglect, where the vines were crawling among weeds and brush, which when covered with the slight coating of snow which fell, acted as a mulch in protecting the vine—and for once it would seem that carelessness and neglect were blessed. Many of the older peach trees are irreparably injured, and will never fully recover. The elasticity or tenacity of the texture of the wood is destroyed, and its mechanical capability to produce or support a crop of fruit, greatly impaired or destroyed. The young trees will recover. In the pear, the crop of fruit is small; some varieties are dying; the Vicar of Winkfield seems quite ruined, while in others the blight is spreading devastation; the Doyenne d'Ete, Onondaga, Glout Moreau and White Doyenne, are suffering much. In apples, Laura's Nora and Josephine (French varieties) are either killed entirely or to the ground. Nickajack and Disharoon are killed to the snow line, and all, but especially late blooming, varieties have been severely injured by insects in the bloom and the young growth. The Sweet cherry has been fatally injured in the tree. The plum has lost its crop, and the young shoots have been injured. The almond and apricot have endured the winter much better than the peach. The quince has suffered in its last year's growth, and consequently in the fruit. The Lawton and Crystal blackberries killed to the ground, while the Mulberry blackberry canes were but little injured—but as is usual with it, the fruit imperfectly developed. The Catawissa raspberry, from its nature, uninjured, and from this till frost has its full quota of fruit. The last year's canes of the common Black and White Cap, and Ohio, were much injured, but bore fruit. Canes of the Kirtland and Franconian killed to the ground, but producing extra fine fruit from the growth of the current year. Brinckle as usual. False Red Antwerp suffered somewhat. Marvel of the Four Seasons injured in the previous year's canes; but having a finer crop of fruit than in any previous season. Gooseberries and currants uninjured, with a full crop of fine fruit. Wilson's Albany and Bartlett strawberries suffered considerably; Triomphe de Gand utterly killed out; Bartlett, MacAvoy's Superior, Tice's Hawthorn, and a recent seedling of great promise, entirely uninjured under the same circumstances. The past winter will materially aid in demonstrating the cause of blight, and the identity of Fire, Insect, and Frozen Sap Blight, and will go far to show that

the blight is caused by any circumstances that vitiates, retards, or impairs the flow of sap in the mature or fruit-bearing tree, and by the vitiation of the saccharine principle (only fully developed in the fruit-bearing plant), adapts it more fully to the wants of various insects, and causes it to appear as if there were several kinds and causes of blight, while there is but one cause and several degrees and accompaniments to its manifestation—viz., Impaired or Deranged Functional Action—but it is still too early in the season to note all its effects.

The President announced the next meeting to be held at Kirkwood, on Thursday, the 4th of August, at 10 A.M. Wm. Muir, Sec.

### Alton Horticultural Society.

FRIDAY, July 1, 1864.

The Society met at the residence of Washington T. Miller in Alton. President Hull in the Chair.

Dr. Hull reported, that having examined the microscope obtained for the use of the Society, he thought for general purposes it was perhaps the best.

Mr. Pearson tendered to the Society the use of a more powerful microscope of easier adjustment. His offer was accepted with thanks.

The Committee on Entomology reported on exhibition—

1. A cedar fly, from Dr. E. S. Hall. It bores in unpainted wood, and is thus very troublesome when numerous.

2. A squash bug, from Mr. E. A. Riehl.

3. A plant louse from J. M. Day, very destructive to the water-melon.

Mr. Riehl said he had been unable to kill the bug with air-slacked lime, or in any way except by hand. Dr. Hull found them exceedingly destructive last year to the Hubbard Squash, attacking the vine, the leaves, and finally even the fruit. This year, however, he had found that by digging a hole about the size of a goose egg near the stem of the vine and covering with a chip, the bugs were induced to seek lodgings on the under side of the chip, whence they could be readily transferred in the morning to a vessel of hot water or soap-suds.

Mr. Day said the plant louse presented by him had appeared since 1857 on the water melon vines in the extensive fields devoted to that product in the American Bottom. They were most injurious in 1857 and 1858. They begin upon the vines when scarcely a foot long, and disappear about the first of August. Are most destructive in dry seasons. Air-slacked lime and tobacco water did not seem to check them. An insect supposed to be the larva of the lace wing fly feeds upon them, and ants and a small fly are found with them. Had received a letter from Dr. Walsh in regard to them which he would endeavor to produce at the next meeting.

Dr. Hull presented the head of an enormous stag beetle that had overcome a craw-fish in a single combat.

The Fruit Committee reported on exhibition:

From Mr. Flagg, late Duke and English Morello cherries, not quite ripe; Cherry, Red Dutch and Black Naples currants very fine; Houghton and wild gooseberries large and fine; Raspberries, Red Missouri, firm, injured by drouth—Doolittle, large, firm, also injured by drouth—Purple Cane, too soft for market; Keswick Codlin apple, not yet ripe.

From C. W. Dimmock, Ohio Everbearing raspberry, large and of fine flavor for a cup-berry. Downing's Everbearing mulberry, green, half ripe and ripe, of exquisite flavor and worthy of trial.

Mr. Pearson wished to know wherein the Downing excelled the common mulberry.

Dr. Hull could see no superiority.

Day thought the Downing decidedly better. Of better flavor and less stringy through the center of the fruit.

Mr. Dimmock was disappointed at first in the quality of the fruit, but finds it improve with use. Bears until frost.

Dr. Hull presented a model of grape stakes intended to combine the advantage of stake and trellis pruning. It consists of three stakes set in a line two feet apart and connected by a strip of lath at the top and at the surface of the ground. This permits the pruner to pass between the vines and finish a vine that he has commenced upon, whilst it gives the advantage of lateral training.

Mr. Pearson brought up the matter of taking off the laterals of the grape vine. Had been in the habit of doing so, but from the talk at late meetings, was inclined to change his practice.

Mr. Miller said the larger the cane the better the fruit. We should have the method of pruning that will produce the largest fruit.

Dr. Hull said that President Shepherd of the State Society, in former years allowed the laterals to grow on his Isabellas and Catawbas, and produced his premium fruit from such vines. His own conclusion therefore was that strength rather than large size was desirable; that letting the laterals grow made a corresponding increase of roots and consequent strength in the vine in the following year, whence resulted the finest fruit. But would use the laterals as a means of acquiring strength, not to raise fruit upon.

Mr. Eisenmeyer said he was intending to try training vines almost upon the ground. The grapes so grown are sweeter.

The Society took a recess, which was very agreeably spent in the dining room, under the hospitable direction of Mr. and Mrs. Miller, and in an examination of the vineyard, which is the largest it is believed in this locality, as well as one of the most fruitful. Five thousand Catawba vines are planted around the sides of a large sink hole, presenting in the season of full fruiting and foliage a most picturesque and pleasing sight.

The Society being again called to order, Mr. Newman read an essay.

A special committee on Wines made the following report:

Catawba, Concord and Virginia Seedling from the vineyard of G. C. Eisenmeyer, of Massouah, Ill., of vintage of 1865. The first, your committee considered equal, if not superior, to any Catawba wine yet presented. Virginia Seedling not so well known, but promising to become still more of a favorite from its resemblance to the old varieties of Port and Madeira. Concord makes a light, pleasant wine, of not much body.

Samples of Catawba from frosted grapes by W. T. Miller. This, although earlier in the season promised to do something, is now worthless, flat, stale and unprofitable.

Samples of blackberry wine by C. W. Dimmock, injured by too warm a cellar.

Currant wine made 1863, by H. G. McPike, from 3 lbs. of sugar to 1 gallon of juice; quality very good, wine improved by age.

Currant wine exhibited by W. C. Flagg, 1 gallon juice, 2 water, 9 lb. sugar, very fine, 14 years old—rarely found in this vicinity.

Samples Catawba contributed by H. Kuenster of Monroe county, injured by transportation in warm weather; quality could not be judged of by the committee.

Dr. Hull inquired as to the productiveness of the Norton's Virginia. Had understood it yielded but 260 gallons to the acre; whilst the Catawba produces 600, and the Concord 800 gallons.

Mr. Miller said, a late Patent Office Report did not give such figures, but gave a larger yield to the Norton's Virginia than to the Concord.

The Investigating Committee being called upon, Mr. Riehl criticised Mr. Miller's former method of planting grape vines in holes. Would plant nothing in deep holes, but would recommend entire pulverization of the soil and sub-soil. In this connection he would recommend for the bluffs a side hill plow he had procured from Cincinnati. It had proved very

satisfactory in its working. Cost here about \$20. In terracing the bluffs, he believes the triangular scraper described in the Rural Register for 1864, would do excellent work.

Dr. Hull recommended root pruning as an effectual preventive of the blight, which he saw was here doing some injury.

Adjourned to meet at Jonathan Huggins on the Woodburn road, on Friday, August 5th, at 10 A.M.

## Domestic Department.

**ANTS.**—As the season is at hand for these pests, the ants, housewives and others who are troubled with them may probably use the following trap to advantage: Procure a large sponge, wash it well and press it dry, which will leave the cells quite open, then sprinkle over it some fine white sugar, and place it near where the ants are most troublesome. They will soon collect upon the sponge and take up their abode in the cells. It is then only necessary to dip the sponge in scalding water, which will wash them out dead by tens of thousands. Put on more sugar and set the trap for a new haul. This process will soon clear the house of every ant.

**VOLATILE SOAP, FOR REMOVING PAINT, GREASE SPOTS, &c.**—Four tablespoonfuls of spirits of hartshorn, four of alcohol, and a tablespoonful of salt.—Shake the whole well together in a bottle, and apply with a sponge or brush.

**EARACHE.**—M. Duval says he has found relief in severe earache—other means failing—from a mixture of equal parts of chloroform and laudanum, a little being introduced on a piece of cotton. The first effect is a sensation of cold, then numbness, followed by a scarcely perceptible pain and refreshing sleep.

**POISON.**—If a person swallows poison deliberately or by chance, instead of breaking out into multitudinous and incoherent exclamations, despatch some one for the doctor. Meantime run to the kitchen, get half a glass of water in anything that is handy, put into it a teaspoonful of salt and as much ground mustard; stir it an instant, catch a firm hold of the person's nose; the mouth will soon fly open—then down with the mixture, and in a second or two up will come the poison.

**CANCER.**—Take a quantity of red oak bark, burnt to ashes; to this add water; boil to the consistency of molasses; apply to the part affected; leave on for an hour; afterwards cover the plaster with tar; remove in a few days, and if protuberances appear in the wound, apply the plaster and tar alternately until they all disappear, after which apply any healing salve. This remedy effected a cure in the case of a gentleman in Missouri. The cancer was on his nose, and after being treated by the ablest surgeons, and suffering painful operations with the knife, etc., was cured with the above preparation.

**PICKLED PORK EQUAL TO FRESH.**—A lady contributor, Perry, Ill. sends the following to one of our exchanges: Let the meat cool thoroughly; cut in pieces four to six inches wide; weigh them and pack as tight as possible in the barrel, salting very lightly. Cover the meat with brine as strong as possible, and mix with it one tablespoonful of saltpeter for every hundred pounds of meat and return it to the barrel. Let it stand one month; then take out the meat; let it drain twelve hours. Put the brine in an iron kettle, add one quart of molasses or two pounds of sugar, and boil until perfectly clear. When it is cold, return the meat to the barrel, and pour on the brine. Weigh it down, and keep it covered close, and you will have the sweetest meat that you ever tasted.

The droppings from stove pipes where wood is burnt leave very persistent stains. Oxalic acid will remove the iron, and when the spots then well washed, ammonia may take up what is soluble.



### HEALTH OF FARMERS.

Farmers ought to be healthy—if they are not, it is their fault. Their occupation is certainly a healthy one. They are not cooped up in shops. They are not excluded from the sunlight. They do not sit bent over the loom, or, plying the needle or the pen, gasping for pure air. They have abundant exercise, health-giving exercise; and, if they are not healthy, it is because their diet is improper, or that they over-labor.

That farmers are careless of their diet as a class, is true. They live too much on salt meats. They do not have variety of diet. They should keep fine flocks of sheep—if for no other purpose, to supply their tables. It is but little trouble to kill a sheep every few days, and of all meat mutton is most healthful; it is far superior to pork.

Farmers are also neglectful of their vegetable gardens. They should have an abundance of every variety of the delicious vegetables. It is surprising how much excellent diet can be obtained from a well cultivated garden. The table can be made to groan with abundance. An excellent variety is always on hand to supply the most fastidious palate. The vegetable garden is indispensable to the health of the farmer and his family.

But the cultivation of fruit is most neglected by the farmer. It is true, every farm contains its apple orchard. But is this enough in this warm climate, where bilious diseases are so prevalent? Why has the Creator given us fruits for early summer and all through the season and the year? Is it not to keep us healthful? Has he not supplied us with the most delicious as well as the most healthful food during the hot months of summer? Have we not large, luscious strawberries that will produce hundreds of bushels to the acre with a little care? And when they are gone, have we not raspberries in profusion, if we will only plant them and care for them? And then we

have currants and gooseberries and blackberries, and the luscious, glorious grape, all with their pleasant acidity to act upon the liver and purify the blood and ward off disease. Cherries, plums, apricots, nectarines, peaches, pears and apples, also, should supply the farmer's table. Then there would be health and cheerfulness, and home would be pleasant and dear, and farming would be considered (as it is) the most healthful and delightful of professions.

### HOW TO LEARN TO WRITE.

By practice. By long continued practice. Not for a year, or two years—but, *many*, years.

"Ah! but this is hard! this won't do! it won't pay."

Then do not write.

"The prize—the wonderful prize of authorship—must be earned first. So there is no gain after all. I thought fame awaited me; I had only to catch it after a little trouble."

Ay! and this is the reason why so many attempt it. They attempt it and always fail. But now and then one has a passion for it, a real like for it, that seems part of his nature itself. This person will scribble, if nothing else. He will do it because he likes it—because more—and here we are touching another important point—because he has something he wants to communicate: perhaps nothing new—it may be only a feeling. But it pleases him (this feeling) and he wishes others to know it also. This is the true motive; this is at the bottom of all successful authorship. This desire to communicate will get up practice; and practice will beget facility and felicity. Then if the writer has read enough to have his taste cultivated, the thing is done. He has then the pen of a ready writer. For writing is but telling what you know. If you have but trash to tell, nobody wants it. If you have never told anything, you can't tell. Hence, much is required for a writer. To look at fine phrases or apt words; this is the most fatal of all things to a writer: this kills dead beyond a resurrection. Egotism will not be permitted; nor will affectation. The man's sincere nature is wanted—the home-bred, natural sentiment: this pleases.

We are so apt to forget. That is the great difficulty in the world. The good things we forget as well as the bad, and easier. We should try and remember. Why learn, when we permit to forget? Life is a science, and we must live in a sort of scientific way, or we won't succeed; we won't succeed at hap-hazard.

[Written for the Valley Farmer.]

### THE LOST NEEDLE.

"Oh, Ella! I have lost my needle—and I can't find it." And there was a "block to piece" and many other little things to make. Here was interest. The man's interest could not be more important—for all this work must be done against a certain time, near at hand.

Ella kept sewing, determined that her work should not suffer. She would have it all nicely finished by the time the company arrived.—She did not trouble herself about her sister—not even cast a glance at her, though she knew her distress.

And the small thing was searching—straining her bright eyes—bright, but not with tears, for that would have interfered with her search. It was in the thick grass that she was looking, laying it open with her little hands, and searching deep and close. But the needle would not sparkle. At last—

"Did your needle have a thread," asked the incorrigible sister.

"No—o!" from the suffering little one, who could not suppress the sob, but still worked, looking the grass through and through, a tear now and then silently dropping down into it.

This lasted for some time. The little one still persevered; did not ask her sister to aid—she was too sensitive and tender. She would have her sister succeed. But she also would like to have a little success of her own. Ah! if but her mother was there! she thought—she would soon find the needle, or present her with another. So she still searched, and with a most commendable patience. At last this patience gave out. And then she had a short, silent cry; and then seated herself at the feet of her sister, who was making rapid strides in her work. She was a few years older than the little sufferer, and like an adult plied her needle. But the little sufferer's work lay idle. That would not be completed—that was certain, for the evening was near at hand, and the company was to appear then. The sisters were far from the house, in a grove, and the little one could not venture to go alone, so the elder instead of accompanying her home to finish the work there, remained where she was, the small one sitting at her feet looking on sorrowfully.

At length she arose and approached her work—"Oh! my foot! she suddenly cried; and there, sure enough, was the needle—she had stepped on it—it had entered her foot, and was most painful—but the cry, quick and piercing as it was, was not a complaining one.

"Ella, here it is, will you pull it out?"

But before her sister had fully comprehended the question, the little sufferer had it out.

"Now I shall sew," she said, with both a relief and a tremor in her voice, for the near approach of evening threatened. And to work she went. Faithfully she plied her needle, but she could not complete her work. They must return. This need up the interest in her work. She was now only interested in her sister's labor—but sadly—which was finished. How neatly it was joined, thought she; how fine the colors, and well arranged! Then a sigh—and she rolled up her unfinished work, and they went home.

That evening Ella's work was highly praised—this was complimented, and that. Ella was praised and envied. She was the queen of the evening.

Did her little sister envy her—despise her! Not in the least. She gloried, as well as a bruised heart could, in her sister's success. But she was not boisterous. How could she be? All her triumph was lost—her work laid away.

"But where is Effie's contribution?" was asked. This was too much for her. She retreated and would have hid away, but her embarrassment prevented; and if it had not, her lame foot would. So she remained the picture of pity and despair.

She was requested to get her work. She did not move. The request was repeated. "It is not finished," was at last ventured. "But get it, dear," said her mother.

She limped off to her room; but returned sprightly, and looking curious. There the block was all nicely "pieced"—all finished, and additional beauty given it.

The mishap had been communicated to her mother, by the elder sister, and, appreciating the distress of her child, her deft hands soon put on the finishing touch.

The prize-matron presented her card to Effie—not only for the merit of the work, but for her patience and goodness of heart under the trying circumstances, the whole juvenile audience assenting with gratified pleasure. MARY.

He who casts off private prayer under any pretence whatsoever—casts off the authority and dominion of God—and this may be as much as a man's life and soul are worth.

He who pursues wealth and dispenses it not in alleviating the woes of his less fortunate neighbor—is an alien in the Universe of God.

## FARMERS' SONG.

In a pure and healthy spot with a farm of his own;  
Secluded from tumult and strife;  
The farmer more blest than a king on his throne,  
Enjoys all the comforts of life.

When the sweet smiling spring sheds its perfumes  
And music is poured from each tree, [around,  
With his well-guided plow he furrows his ground,  
And feels independent and free.

When summer to fruit the sweet blossoms transforms,  
And his harvest fields wave in the breeze,  
His heart with glad hope and expectancy warms,  
And rests in contentment and ease.

When bountiful autumn her treasures bestows,  
And his crops are all gathered and stored,  
His soul to the Giver with gratitude glows,  
And plenty presides at his board.

When winter howls dismally over the earth,  
And want tells its tale at the door,  
Serenely he sits by his bright blazing hearth,  
And dispenses relief to the poor.

Then let idle ambition her baubles pursue,  
True wisdom looks down with disdain:  
The home of the farmer has charms ever new—  
There health, peace and competence reign.

## The Influence of Poetry.

Not the poetry of verse, for this is often mere tinsel, and always necessarily more or less so. Pure poetry, in verse, is found only in single lines, or now and then a stanza, while prose teems with it—teems with what? With sentiment, thought that begets emotion. And this same thought is found in nature. There is its color, its form, its grandeur, its many things that inspire us. The evening's red, moonlight, the stars, the grass, flowers, brooks, mountains, the forests thick with leaves—all these things are very common, but very pleasant, we say. They would be more so, were we not so familiar with them. They delight us, and therefore we like them—and therefore they are poetry. So the human form has many things that please us; the human heart still more. These, as they excite us, are poetry.—The farmer's pleasure at his green fields; his herds feeding, "forty like one;" the warm sunshine; the soft winds, and the quiet country life generally—these are poetry—pastoral poetry. When the child goes out and gathers buttercups and daisies, tall as its own head, or plays at hide and seek—this, says a distinguished poet-critic, is poetry. Love is poetry—hence all poets and romancists treat of the tender passion, as well as of nature. A dear domestic hearth, that seems the only one in the world—is pure poetry. Happiness, itself, is the soul of poetry. Here, then, is an influence for our good. We see poetry, and know it not—know not that that is poetry.

"I thought it was poetry in books, in numbers."

Error all. Poetry is in us, and in the things around us that please us. Now here is just the influence that makes good and happy. Let us then cultivate a love for this spirit of poetry in the world. There is no other. Books at best but represent this. F.G.

## TOBACCO.

"Tobacco is beneficial," say who? Never, never, those who use it not. Is it not then suspicious that those who use it are hurt, or at least not benefitted by its use? Even those who use it—at least the large majority—shake their heads against it; they are honest enough to own the corn—but, "I can't leave it off." And then the trouble in attempting to leave it off—to say nothing of the expense and the filthiness. And yet people will learn to smoke—people well advanced, who ought to know better.—We can forgive boys for their boyish notions, much as we despise the provoking thing. These silly youngsters only ape; and hence it is simply disgusting. Do people know how they are trifling in this matter? Are they aware of the danger? It seems not. We hope the present high tax on tobacco will bring them to their senses. F.G.

## PLEASANT SURPRISES.

The sunshine that sometimes quietly takes a seat in your room in mid-winter.

A forest brook in August, so full that the season has no effect upon it—and so clear it seems but another air to show you the pebbles and the smooth bottom.

A green field in March, west of you, with the afternoon sun upon it.

An eye that reminds you of a precious stone. But better—an eye that itself is precious.

A bird pelted by the storm, but singing after it.

The sight of even an indifferent friend, when you are homesick among strangers.

The pleasure of a dog, when he meets an old friend. The affection of a dog at any rate, reminding you so much of human affection.

The word of affection dropped accidentally by the pen of your sweet-heart.

The sight of a child, not your own, which you love.

An eagle.

An angel (in human form) that yet does not know it is an angel.

A man just out of trouble, that didn't hurt him.

Forgetting your own meal, when you are eating a better at something else.

To see a poor, miserable man made happy.

To do a really meritorious act, when your heart is in it.

To save a maiden from disgrace.

To go to bed with a good conscience—(old, but worthy to be repeated.)

To look upon death as another new field of enjoyment—showing your life is right, and your view of death the same.

To see an aged wayfayer shed tears at the receipt of a needed alms.

Stars on a dark background of night, seen from the city street.

The first breath of a buckwheat field, ere the field is seen.

The idea that the simplest of flowers (small Celandine) "heralds in the whole troop of flowers."

Your first sunset in Italy.

The first humble-bee of the season—telling you of summer days.

The pine tree looking over the other trees to the sea, and responding with its melody. (Lowell's thought.)

The sudden face of a friend, when you expected a bore.

The thought that there are many "pleasant surprises" yet in store.

### COOL CELLARS.

We repeat what we have said about cellars. We can have cool cellars with a very little trouble. Just open the windows when the weather is cool; and close when it turns warm—who can't do this? Try it—you will then see how hard your butter is—how cool and well everything keeps. Late apples may thus be kept till July or August, and in good condition. We all know what a distress a hot cellar in summer is. Keep it open all the while, and not only will the wind drive out the cool air, but insects will get in, and get into everything you have exposed. Insects will bother you but little if you keep a cool, well-guarded cellar. How easy it is to do it. Just shut after a cool time, when your cellar is full of cool air. Keep shut till another cool time; then open for ventilation. Remember, air is not poisoned by the breath in a cellar as in a room—and, taking it for granted, your cellar is clean, there is no impropriety in excluding the outside air for a few days, or even a few weeks. See how long the outside air is excluded in winter. Who will be too lazy to follow our suggestions? It

is not an experiment—it is not a theory. It is a thing we are constantly practicing during the summer. The wonder is—that people are so careless on this subject. The truth is, most of them we fear are ignorant, and know not how to do it. It is the business of agricultural papers to tell such things. Will you be benefited by it?

### JEAN INGELOW.

The reader will permit us to say a word about this poetess whom everybody is talking about. Alexander Smith had a sudden popularity when he stepped before the public; but that popularity waned. Jean Ingelow (an assumed name) has also a noted reception—but not so crushing as her countryman of the "Life Drama."—The critics had learned a lesson, and they are more circumspect. But this English thrush—not a lark—sings them all into good nature—and they cannot help but admire.

The thrush passes to this country—and here she is at once at home. Most delightfully does she sing in all our fields (papers), and in each season without ceasing. She sang all winter—she is singing now. Some papers have published so much of her poetry, that they have almost printed her entire.

What sign is all this? It is that we have a true singer here. Not a critic among us that we know that has not listened and praised. This looks very much—like popularity, shall we say? Yea, it is popularity in full; and it is acknowledged by the fair author. But is it fame—or, rather, will it be fame? Perhaps—but we fear. It requires the most solid substance for this—the purest and rarest—the prime article. And has Jean Ingelow given us this? We think hardly. For instance, what do we remember in her writings? Is there any particular point that makes an impression—that haunts us—that we shall never forget?—for an immortal poem makes an immortal impression. The wars in Homer will never be forgotten. The heroes are forever distinct on the memory. So Ossian's Cuthullin has passed into history. The "Ruined Archangel," also. Chaucer's early sketches are still admired, though in an antiquated tongue. Will any one deny that Wordsworth has made an impression that will never be effaced? He will be read with pleasure always, from necessity. The world will never let the "Bridge of Sighs" die out; nor the "Song of the Shirt," though the finer things of Hood will cease to be remembered—because the poems above mentioned take

hold on the fancy, and make an impression on the heart. People will always turn to them, to be stirred by them. So with "Maud Muller"—at least so it strikes us. The same principle that hands down to us the older poets, is found in these last that we have named.

Is this principle present in Jean Ingelow? What great thing inspires us here? There are many of the most felicitous expressions—more felicitous, because more pure and fragrant than those of Alexander Smith. But they are mixed with matter that is dull—or, at least, not inspiring. This is put in to help the rhyme and the rhythm. The art of versifying, this poetess understands but partially—the art of writing poetry, still less. There is less art, but more nature in her writings. A poet she is—and that unmistakably; and we think she will advance. This volume is but promise—a spring full of flowers and weeds. The ripe summer and autumn will give us fruit; so we trust.

Now, she gathers flowers; and she does it very nicely. She makes wreaths at random. There is a plenty of true fragrance and bloom, and no mistake. The very air is felt. You are reminded of Shakespear, in the hearty naturalness that is generally exhibited before you; she stints not herself. One would think she was prepared at any time to gather a wreath and fling it at you; and she seems to do these things unbidden. As such, and in this field, she is a poet—charming, sweet, fragrant.

But this does not make her a great poet—not even among her flowers—for the art is not natural to her—the art of setting them to the greatest advantage. A whole poem is not concentrated on a single thought, or devoted to a single purpose. She does not gather her strength, and with foresight and wisdom so apply her materials to make her subject conspicuous, impressive from its setting, from its management. Each poem is not a building, deliberate, inspired, everything in its place—all with a view to force and beauty.

Instead of this, she only builds at random; gathers material that would give a sparkle to the finest eye of genius—and, in other, abler hands, rise in symmetry, and in compact, commanding power.

But, as we have said, there is promise; there may be performance of a higher, a lasting order. As it is, the matter is too much mixed—sweet as it is—all in confusion and profusion. Ah! what might not arrangement have done.

We are loth to leave these pages—we will say the contemplation of them—for the thought of

such fields, such skies, such wealth, breathing and shining with dew and fragrance! This general impression haunts us. But this must withdraw; there is no strong point to hold the mind—no deep incision. You know you have been in the fields; you are still followed by the fragrance and the music—the music of bees "giddy with clover," but no impressions of the substances of things, wrought through the things, guided by an artistic insight. Will our poetess ever arrange these things, so as to give a lasting effect? If not, there will be a repetition, *ad nauseum*, we fear. A startling advent, is no sign of prosperity. On the other hand, our best poets had difficult beginnings. Let us hope for a good career to this auspicious poet, and meanwhile enjoy the natural repeat she has presented us with.

[Written for the Valley Farmer.]

#### DIRT.

Dirt is not only prevalent in the world—the earth is made of it—but we find it rather abundantly in our houses. How many neat houses do we find? how many tidy women? It is an abomination how slovenly our housewives generally are, especially when left to themselves—that is, they are not instinctively clean. When a neighbor arrives, what jumping and hiding! what excuses!

Some people are only at home in the dirt. Let these remain there. They will not be troubled save by those of their own kind—kindred in dirt. I fear our own fellow farmers have to plead largely guilty in this respect. They have their excuses, as farming has much to do with dirt—not real dirt, however—filth, grease, the accumulation of a wretched cuisine. That is dirt. The ground is not dirt. But the onion smell of the house and the person, and the greasy appearance of the room—dirty floor, unclean dishes and spreads—this is dirt.

A man of breeding will not say much when he meets with such scenes. True politeness forbids; but he thinks it, unutterably. But there are eyes that will communicate. You cannot hide a dirty house; it will have a reputation at once, and keep it as long as the dirt lasts. Wise looks are exchanged, and chuckles on the subject; and such places are generally avoided, as a pest would be. Yet these people will grow fat over their dirt—fat on it. You will generally find fat pigs in such sties.

MARY WELLS.

Wholesome bread is made thus—Stir unbolted wheat flour into cold water until as thick as common stirred cake, bake 20 minutes in a hot oven, in small tart pans.

## BIRDS.

Happy are the birds in such air, among such scenes,  
Buried in clover and in blossoms sweet!

They eye the flowers, and many-veined leaves,  
Flooding the woods and burying all their song  
So that there is no echo. Happy birds!  
Singing still in the echoless woods,  
Where cool the shade is, cooler the brooks.

Here also are the flowers—of the trees—  
Blossoms innumerable and strange,  
Which the bright eyes see—

And nests—how many nests!—  
Each the affection of some bird, and each,  
So large the party, different from its neighbor,  
Intent on its own domicile alone—affection true.

The bird fears not, though subject to the rover owl.  
It trusts in the Protecting hand—and it succeeds—  
Not always; it still builds its nest,

And rears its brood, and sings,  
And then returns to other lands,  
Forever guided by the Power that cares  
For birds and flowers and glittering gnats,  
That make the summer noons melodious.

Oh! birds are but the choir,  
A little lower than that other choir  
That flits from Heaven true,

Dwelling on wings, living in song.  
We hear them, and we see them, and,  
We call them ours—our birds, that touch  
Our human hearts, not less made human

By their song, but cheered and charmed—  
And lovers of our kind,  
Dwelling about our habitations,  
Singing in the trees, and in the fields,

Till winter drives them from our sight—  
But spring will bring them here again. P.G.

PURE AIR is an excellent thing; it is a clean thing; it is necessary. But it is made a humbug. Foul air, dirt, &c., are reprobated without stint—and, so far as cleanliness is concerned, they should be. But it is a different thing with health. The healthiest nations are the very dirtiest. Thus, the Esquiman is not only greasy, but puts on the grease: he lives in grease; and he is the fattest and healthiest person in the world. So it is with the poor of any city, or of the country. They are less cleanly than the rich. It is remarkable—yes, remarkable—how many people can inhabit the same close apartment, and yet enjoy as good health as those in airy rooms—ay, and better. We are carrying the pure air business too far. Let us be clean, but not foolish.

We hate, and then are sorry. Has this ever had an exception? If so, we pity the man who is the subject of such a feeling—glad he hates,

## THIS, THAT AND THE OTHER.

We must break away from monotony and branch off into variety, which is the "spice of life"—so says the world, and it is therefore experience. All the colors are more agreeable than one color. Fields, woods, mountains are a more pleasant sight, than one of these alone. We soon get tired of one; but we are diverted by the many—and yet we never seriously think upon this. We act in the old hum-drum way, and are bored continually.

The love that is quick to come (love at first sight), is quick to go, and *vice versa*.

A village crowded with roses is a pleasant sight. We have seen such—but how few there are.

We eat because we like it, and not because it does us good. But we always get the after evil for the good indulged in—that is the excess, and consequently the hurt.

In summer we should be very careful what we eat, and how much—much more so than in winter, as then the whole system is in an enfeebled state.

Our beverages are hurtful only in the excess.

We repeat—a village crowded with roses is a pleasant sight. Like so many eyes they look at you—the blushing fair faced roses—and their breath goes out after you. If you are poor it is all the same. They breathe upon you, even if they are in a rich man's garden.—In this respect they are often better than the rich man.

We must change! Happy one day—unhappy the next. This is human nature. To make calculations in our bright moments, is only to be disappointed when the dark come—as they will come just as sure as the bright. "But you are forever ringing on changes." Yes, and it is because it is needed; it is because people are constantly not heeding this change: they never think. They are carried on by the changes and forever varying with them. This makes them as unstable as the changes themselves.—Is not the world full of such people? And are they the ones that succeed? Hardly. We must lay down a steady course, despite circumstances, and make our own way.

Heat is the great depresser. Be careful then, as the system is in a delicate condition. Your diet is the first thing to attend to. Less food the first requisition; the avoidance of the sweet and the adoption of the sour, in general, the second. Nature will indicate others.



## Editor's Table.

**FASTEST TIME.**—In reply to "Reader of Valley Farmer," we will state, that the fastest trotting time on record is, 2 m. 19½ seconds, made by Flora Temple; and the fastest pacing time is, 2 m. 17½ seconds, made by Pocahontas. The fastest running time in this country is, 1 m. 44½ seconds. The fastest running time in England was made by Saunterer in 1 m. 40½ seconds.

**NEBRASKA.**—Our highly-esteemed friend, Dr. H. Link, of Omaha, Nebraska, with whom we "ate salt" fifteen years ago, inclosed us a list of subscribers and thus speaks of the crops in that territory. We regret to hear that the season has been so unfavorable. The drouth has produced an amazing crop of chints bugs. They are always worse in a dry season. No practical means have been discovered to prevent their ravages. They are doing a vast amount of injury to crops in some portions of northern Illinois.

Dr. Link writes: "Crops in Nebraska are poor; wheat and oats will not be half a crop, owing to drouth and chints bug; many fields will not be cut; but little of that which will be cut will be bound—so short is it from dry weather. Corn crop good—the early planting; the middle and late planting did not come up till from the 25th of June to July 1st. No rain for six weeks till about 25th June. Grass poor. Farmers will be hard pressed to secure sufficient to answer their necessary demands. If you have not made war on the chints bug, pitch into it at once."

Doctor, we are much obliged to you for your letter as well as the remittance. A long and happy life to you and your estimable lady. We hope sometime to make you a visit and enjoy a talk with you and yours over times long ago passed by.

**CROPS IN CENTRAL ILLINOIS.**—Hon. M. L. Dunlap writes us: "Wheat, barley and oats good; corn fine; grass light; flax short, but well filled. Notwithstanding the drouth, Central Illinois will come out with fair crops. Apples and pears abundant. Small fruits, except blackberry and grape, never better."

**TO COUNTRY BOY.**—Your verses came duly to hand. The matter is good, but the versification is very poor. Better study in prose. To write verses well, you must study diligently the rules of versification. It is an art requiring long study and practice to write in poetic measure. And then the highest order of cultivated sentiment and feeling is requisite to write poetry. If, however, you have the love of poetry burning within you; if you take delight in all that is beautiful, and noble and grand in nature and art, and are willing to labor diligently, always, you may become a poet—but never without.

**FARMS AND LAND FOR SALE.**—Any one desiring to purchase an improved farm, or a tract of land, is referred to the advertisements on page 5 of the cover of this month's issue.

## Bugology.

**ED. VALLEY FARMER:** I send you a few lines about a bug in my field, shaped like the common potato bug, somewhat smaller, with black wings and yellowish brown head. Upon inquiry, no one can enlighten me on the subject. They are very shy and keep mostly under clods. They eat the corn leaves I suppose. I have not seen them at it, but where I find most of them there is more damage done. There is about six to each hill of corn. The leaves appear to suffer where they touch the ground. The field they occupy has laid idle for two years, the grass and weeds burnt off last spring, and corn sown. I should like to be informed on the subject. Respectfully,  
Warrensburg, Mo. N. GREIM.

[REPLY.—We forwarded our correspondent's letter to Benj. D. Walsh, of Rock Island, Ill., the distinguished Western Entomologist, and received the following reply. Those who are troubled with insects injurious to vegetation would do well to send them to Mr. Walsh.—ED.]

Rock Island, Ill., July 5, 1864. N. J. Colman, Esq.  
—Dear Sir: As to the insect spoken of in Mr. Greim's letter, it is impossible to say with any certainty from so brief and indefinite a notice, what species he refers to, or even whether it is a fly or a beetle. I should rather guess, however, that it is one of the ground beetles he has got hold of—perhaps *Agonoderus pallipes*—which swarms here in such situations, and if so, it is a cannibal insect preying upon other insects, and a friend instead of a foe. If he likes to send specimens, I could tell him what it is and all about it.  
Respectfully yours, BENJ. D. WALSH.

**THE CROP OF PEACHES.**—The Trenton Gazette says it promises to be large—the largest ever raised in New Jersey. In Monmouth and Ocean counties we hear of no drawback. The veteran producers of Monmouth county predict a crop above the average. Benj. Reed, of Hightstown, has 180,000 trees in Ocean county that are in bearing, and is preparing to send to market 224,000 baskets. A friend, whose judgment we think is good, informs us that the fruit crop of New Jersey, south of the Raritan bay, from present appearances, will be very large.

**FROM TENNESSEE.**—Ed. Valley Farmer: Enclosed you will find \$1, for which you will again record my name with those of the many "veteran" subscribers that now grace your books. I say "again"—because I was, previous to the beginning of the rebellion, one of your most devoted patrons. I had hoped that my name should never have been dropped from your list. I, like thousands of others, rallied to the support of the old Star Spangled Banner, and have since been so completely engrossed in military affairs that I have rather neglected everything not directly connected with the army—your invaluable monthly among the rest. I have renewed my subscription with the intention that it shall not be again neglected until the end of the war. I am no writer, but as my pilgrimage is not yet ended, and a probability exists that we will see a great deal that would interest your readers in general, I would say, that if you interpose no objections, I will drop you a few lines occasionally, giving a rough outline of the most interesting scenes that may come under my personal observation. The

troops that are now here (1st and 3d Div. 16th A. C.), designated as the Right Wing, 16th Army Corps, are under the immediate command of Maj. Gen. A. J. Smith, who is moving in the direction of Corinth, Miss., repairing the Memphis and Charleston Railroad. The cars are now running as far as Grand Junction. The country around here is flat, well timbered, and watered by nice running springs. Fruit is reasonably plenty, and is just beginning to be fit for use. Berries of all kinds are ripe. Peaches and apples are to be found in abundance, notwithstanding severe late frost last spring. I will write no more now, but you may expect to hear from me again soon as anything turns up. FRANCIS M. THORN.

Lagrange, Tenn.

[REMARKS.—We shall interpose no objections to your writing for our journal. Our readers will be more directly interested in information relating to the Agricultural and Horticultural interests of the country, as our newspapers abound in information relating to army matters.

We are glad to hear that in Tennessee peaches are to be found in abundance, and we hope they may find their way here, for we do not believe that a bushel of peaches will be raised in the whole State of Missouri the present year.

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WILKES' SPIRIT OF THE TIMES.—This is one of the most readable of our exchanges. It contains a vast variety of matter. To one fond of fishing, hunting and other sports, it is a source of great enjoyment. To the breeder and trainer of horses it is invaluable. It chronicles everything of interest in the sporting world. Its editorials are racy, and one never goes to sleep in perusing its pages. Terms, \$4 per annum. Those wishing to subscribe, should address George Wilkes, 201 William Street, New York.

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